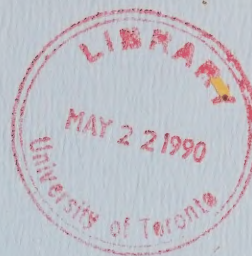


CALON  
EAB  
-H26



# ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 200

DATE: Wednesday, May 9, 1990

BEFORE:

A. KOVEN, Chairman

E. MARTEL, Member

FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

**FARR &**  
ASSOCIATES  
REPORTING INC.

(416) **482-3277**

2300 Yonge St., Suite 709, Toronto, Canada M4P 1E4



3 1761 11652479 4

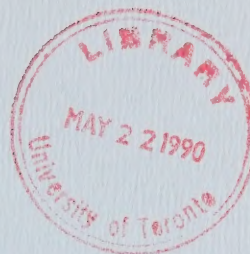




CALON  
EAB  
-H26

EA-87-02

Government  
Publication



# ENVIRONMENTAL ASSESSMENT BOARD

---

VOLUME: 200

DATE: Wednesday, May 9, 1990

BEFORE:

A. KOVEN, Chairman

E. MARTEL, Member

FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

**FARR &**  
ASSOCIATES  
REPORTING INC.

(416) **482-3277**

2300 Yonge St., Suite 709, Toronto, Canada M4P 1E4





Digitized by the Internet Archive  
in 2023 with funding from  
University of Toronto

<https://archive.org/details/31761116524794>



HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL  
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR  
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental  
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental  
Assessment for Timber Management on Crown  
Lands in Ontario;

- and -

IN THE MATTER OF a Notice by the  
Honourable Jim Bradley, Minister of the  
Environment, requiring the Environmental  
Assessment Board to hold a hearing with  
respect to a Class Environmental  
Assessment (No. NR-AA-30) of an  
undertaking by the Ministry of Natural  
Resources for the activity of timber  
management on Crown Lands in Ontario.

-----

Hearing held at the Environmental Assessment  
Board Offices, Suite 1201, 2300 Yonge Street,  
Toronto, Ontario, on Wednesday, May 9th, 1990,  
commencing at 8:30 a.m.

-----

VOLUME 200

BEFORE:

MRS. ANNE KOVEN  
MR. ELIE MARTEL

Chairman  
Member





A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	
MS. C. BLASTORAH )	MINISTRY OF NATURAL
MS. K. MURPHY )	RESOURCES
MS. Y. HERSCHER )	
MR. B. CAMPBELL )	
MS. J. SEABORN )	MINISTRY OF ENVIRONMENT
MS. B. HARVIE )	
MR. R. TUER, Q.C.)	ONTARIO FOREST INDUSTRIES
MR. R. COSMAN )	ASSOCIATION and ONTARIO
MS. E. CRONK )	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY )	ASSOCIATION
MR. H. TURKSTRA	ENVIRONMENTAL ASSESSMENT BOARD
MR. E. HANNA )	ONTARIO FEDERATION OF
DR. T. QUINNEY )	ANGLERS & HUNTERS
MR. D. HUNTER )	NISHNAWBE-ASKI NATION
MS. N. KLEER )	and WINDIGO TRIBAL COUNCIL
MR. J.F. CASTRILLI)	
MS. M. SWENARCHUK )	FORESTS FOR TOMORROW
MR. R. LINDGREN )	
MR. P. SANFORD )	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
MR. D. WOOD )	POWER & PAPER COMPANY
MR. D. MacDONALD	ONTARIO FEDERATION OF LABOUR
MR. R. COTTON	BOISE CASCADE OF CANADA LTD.
MR. Y. GERVAIS)	ONTARIO TRAPPERS
MR. R. BARNES )	ASSOCIATION
MR. R. EDWARDS )	NORTHERN ONTARIO TOURIST
MR. B. McKERCHER)	OUTFITTERS ASSOCIATION





APPEARANCES: (Cont'd)

MR. L. GREENSPOON)	NORTHWATCH
MS. B. LLOYD )	
MR. J.W. ERICKSON, Q.C.)	RED LAKE-EAR FALLS JOINT
MR. B. BABCOCK )	MUNICIPAL COMMITTEE
MR. D. SCOTT )	NORTHWESTERN ONTARIO
MR. J.S. TAYLOR)	ASSOCIATED CHAMBERS OF COMMERCE
MR. J.W. HARBELL)	GREAT LAKES FOREST
MR. S.M. MAKUCH )	
MR. J. EBBS	ONTARIO PROFESSIONAL FORESTERS ASSOCIATION
MR. D. KING	VENTURE TOURISM ASSOCIATION OF ONTARIO
MR. D. COLBORNE )	GRAND COUNCIL TREATY #3
MS. S.V. BAIR-MUIRHEAD )	
MR. R. REILLY	ONTARIO METIS & ABORIGINAL ASSOCIATION
MR. H. GRAHAM	CANADIAN INSTITUTE OF FORESTRY (CENTRAL ONTARIO SECTION)
MR. G.J. KINLIN	DEPARTMENT OF JUSTICE
MR. S.J. STEPINAC	MINISTRY OF NORTHERN DEVELOPMENT & MINES
MR. M. COATES	ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI	BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY





APPEARANCES: (Cont'd)

MR. R.L. AXFORD	CANADIAN ASSOCIATION OF SINGLE INDUSTRY TOWNS
MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON
MR. C. BRUNETTA	NORTHWESTERN ONTARIO TOURISM ASSOCIATION





I N D E X   O F   P R O C E E D I N G S

<u>JAMES WADDELL;</u>	
<u>MALCOLM SQUIRES;</u>	
<u>JAMES RODERICK GEMMELL;</u>	
<u>MURRAY FERGUSON;</u>	
<u>BRIAN NICKS;</u> Resumed	35340
Direct Examination by Ms. Cronk (Cont'd)	35340
Cross-Examination by Ms. Swenarchuk	35392





I N D E X   O F   E X H I B I T S

<u>No.</u>	<u>Description</u>	<u>Page</u>
1153	Extract from the Silvicultural Guidelines Series from the Ministry of Natural Resources	35358
1154	Interrogatories referring to Panel 4 evidence	35391
1155	Interrogatories referring to Panel 8 evidence	35392



1       ---Upon commencing at 8:30 a.m.

2                   MADAM CHAIR: Good morning. Please be  
3 seated.

4                   We have one court reporter today so we  
5 are going to take a ten-minute break every hour. Is  
6 that all right with the parties?

7                   MS. CRONK: Thank you.

8                   JAMES WADDELL;  
9                   MALCOLM SQUIRES;  
10                  JAMES RODERICK GEMMELL;  
                  MURRAY FERGUSON;  
                  BRIAN NICKS;       Resumed

11

12       DIRECT EXAMINATION BY MS. CRONK (CONT'D):

13                   Q. Mr. Waddell, when we broke yesterday  
14 afternoon you had outlined to the Board certain  
15 concerns that the Industry has with respect to the  
16 nursery stock cap put in place by the Ministry of  
17 Natural Resources production forecast and certain  
18 silvicultural cutbacks that were introduced in 1989 and  
19 1990.

20                   And could I ask you with respect to the  
21 evidence which you gave on those issues, generally how  
22 will a new timber production policy from the Industry's  
23 perspective assist in the future with respect to those  
24 concerns?

25                   MR. WADDELL: A. Well, the Industry



1 believes that a new timber production policy is  
2 essential in order to determine the appropriate level  
3 of forest or timber renewal in the province, and once  
4 we have determined what the renewal, or once the  
5 objectives have been identified I should say, then it  
6 becomes possible to allocate the proper funding levels  
7 to implement and attain the objectives.

8 Without such a policy the MNR may not be  
9 able to adequately fund the required regeneration and  
10 silvicultural treatments that are contemplated for the  
11 Crown for both FMAs and Crown management units within  
12 the area of the undertaking.

13 Q. Perhaps I could address my next  
14 question to all of the members of the panel and it  
15 flows from an inquiry made by the Board that gentlemen  
16 made during the scoping session for Panel 8.

17 Can any of you assist as to whether there  
18 have been situations of which you are aware where FMA  
19 companies have invested their own funds to overcome a  
20 shortfall of MNR silvicultural expenditures? Is anyone  
21 aware of the situation of that kind?

22 MR. GEMMELL: A. Yes. Well, I have an  
23 example which I indicated last week in the renewal  
24 portion of our FMA where we use a helicopter to access  
25 areas. In this case it was an area very close to the

1 mill which we cut this past winter, and the best access  
2 was by what we considered to be helicopter a couple of  
3 miles in.

4 We could have gone -- we could have  
5 accessed it by winter road across the water crossing  
6 but our decision was to access it with a helicopter.  
7 We hadn't put that in our plan previously and in this  
8 case we would use the helicopter and absorb the cost to  
9 do that. The helicopter would be used to transport the  
10 men and the container stock.

11 Q. Mr. Ferguson, I thought you were  
12 reaching for the mike as well.

13 MR. FERGUSON: A. Yes. I'm right at the  
14 example in 1989, Canadian Pacific on English River  
15 Forest conducted some site preparation at our own  
16 expense in order to accommodate stock that was due for  
17 arrival in 1990. I believe the extent of that was  
18 approximately 130 hectares of site preparation for  
19 planning which was conducted at CP's own expense.

20 Q. Are there any other examples,  
21 gentlemen?

22 MR. NICKS: A. Yes. There is an example  
23 on the E.B. Eddy operations on the lower Spanish Forest  
24 from last spring, spring of 1989, where a company  
25 undertook the planting of two family tests which are

1 genetic tests for tree improvement under our tree  
2 improvement cooperative with the MNR and two other  
3 companies. And originally the company was to be  
4 compensated with the MNR payment rate for tree  
5 planting, but due to a shortage of tree planting funds  
6 we ended up absorbing the entire cost of this  
7 particular operation which was in the neighbourhood of  
8 \$26,000.

9 Q. Well, Mr. Waddell, perhaps I could  
10 return to you then.

11 In light of the types of concerns that  
12 you've described at the Industry as having with respect  
13 to the need for a new timber production policy, is the  
14 Industry proposing for acceptance and approval by this  
15 Board any terms and conditions relating to the issue of  
16 a timber production policy?

17 MR. WADDELL: A. Yes, we are. We are  
18 proposing two terms and conditions, and I would like to  
19 show those to the Board at this time with an overhead.  
20 If you would please, Mr. Ferguson?

21 Q. Just a minute and we'll get the  
22 lights, Mr. Waddell.

23 A. These are the Industry's proposed  
24 term and condition no. 93 and 94, both dealing with the  
25 proposed new timber production policy. Condition no.



1 93 is that:

2 "The Ministry shall complete and submit  
3 for approval a new timber production  
4 policy and related implementation  
5 schedule no later than November the  
6 3rd -- no later than November (sic) 30th,  
7 1991."

8 Proposed condition no. 94 is that:

9 "The Ministry shall determine through  
10 the timber production policy an  
11 appropriate level of required  
12 silvicultural activity throughout the  
13 entirety of the area of the undertaking  
14 including management units. The Ministry  
15 shall carry out or cause to be carried  
16 out such renewal activities as are  
17 required thereunder."

18 And Madam Chair, we believe that these  
19 proposed terms and conditions are extremely important  
20 as we have been trying to illustrate to you through the  
21 latter part of our evidence the significance that the  
22 Industry places on developing jointly with the Ministry  
23 a new timber production policy that will service in the  
24 years to come.

25 MS. CRONK: Madam Chair, for the record,

1 a copy of the overhead to which Mr. Waddell has just  
2 referred is part of Exhibit 1148 that has been provided  
3 to the Board.

4 Q. Apart from the issue of the need for  
5 a new timber production policy, Mr. Nicks, as I  
6 understand it you wish to outline for the Board certain  
7 other factors relating to the potential enhancement of  
8 renewal activities in the area of the undertaking?

9 MR. NICKS: A. Yes, that's correct.  
10 Could I have an overhead, please. Thank you.

11 This overhead I believe forms part of  
12 Exhibit 1147, the factors contributing to enhance  
13 renewal. Firstly, as Mr. Waddell has discussed in some  
14 detail, the new timber production policy. I'll go on  
15 to discuss the remaining factors on the list.

16 Second being the integration of  
17 harvesting and renewal. We've heard evidence on the  
18 common administrative and implementing staff reporting  
19 relationships. For example, in the E.B. Eddy case  
20 study the reporting of the manager of fibre supply and  
21 the manager of forest resources to the vice president  
22 of forestry and wood products, and so on down the line.

23 The second factor, or the third on the  
24 overhead, is the continuing development of harvest  
25 methods and equipment to facilitate renewal. Examples

1 are improved fibre utilization through whole-tree  
2 chipping; site protection through the use of wide tire  
3 skidders and access provision for tertiary travel roads  
4 for tree planting. And these are outlined in some  
5 detail in our response to Forests for Tomorrow  
6 Interrogatory No. 4.

7 The next factor is the continuing  
8 development of a sense of stewardship as evidenced by  
9 active programs to communicate renewal achievements to  
10 the public. For example, videos, tours of woods  
11 operations and mills, company publications and  
12 statements of forest management policy.

13 A fifth factor would be participation in  
14 tree improvement cooperatives. For example, the  
15 Ontario Tree Improvement Council and the North Shore  
16 Tree Improvement Cooperative. These are joint ventures  
17 with MNR and other Industry companies to improve the  
18 form, the wood quality, and the growth rate of the  
19 native conifers, principally jack spruce and jack pine.

20 And the sixth factor contributing to  
21 enhanced renewal is the establishment of forestry  
22 Industry experiments in the area of cultural practices  
23 to improve the survival, stocking and the growth rates  
24 of conifer regeneration. And a survey that I undertook  
25 of six Industry companies indicated some 40 trials in



1 progress. Notable among these are intensive forest  
2 management block in the northern region, joint ventures  
3 with the Ministry of Natural Resources to compare wood  
4 volume returns with increasing silvicultural  
5 investment.

6 The second example would be the  
7 assessment of ground application of liquid and granular  
8 herbicides which are not currently registered for  
9 aerial application; planting trials with a wide variety  
10 of container stock types; the testing of the  
11 effectiveness of synthetic gels preventing root  
12 dehydration from bareroot stock after planting; and as  
13 Mr. Squires mentioned yesterday, indoor cold storage  
14 trials with container stock to extend the spring  
15 planting season.

16 Other examples of forestry experiments  
17 being conducted by FMA companies are experiments with  
18 simultaneous application of seed during site  
19 preparation with disk trenchers. This will reduce  
20 seeding costs and improve the spacing of future stands,  
21 and as well there are a number of trials documenting  
22 the benefits of juvenile spacing including diameter  
23 growth and decreasing the rotation length of dense jack  
24 pine stands such as those originating from various  
25 seeding.

1 Q. Can I just stop you there for a  
2 moment. Those latter items that you've outlined, are  
3 those all matters in which FMA companies are currently  
4 engaged?

5 A. Yes, they are.

6 Q. And are those in the nature of -- do  
7 they fall in the category of on-going research by the  
8 companies or in some other category?

9 A. Most of them are on-going. Some of  
10 the projects are, of necessity, long-term such as the  
11 growth from yield experiments, so the majority would be  
12 on-going.

13 Q. And how do you see these factors that  
14 you've indicated on your overhead, Mr. Nicks, as being  
15 related to renewal in the future?

16 A. We think that the foregoing factors  
17 will contribute to the enhancement of forest renewal.  
18 It's always wise to keep trying new ideas and helping  
19 to improve forestry practices.

20 I think these ventures also clearly  
21 demonstrate the enthusiasm and the imagination with  
22 which the Industry forest managers are meeting the  
23 forestry renewal challenge. So that is my conclusion  
24 from these initiatives.

25 Q. Thank you.

1                   Gentlemen, I would like you to provide  
2                   the Board, if you could, with some relative indication  
3                   of what your current renewal programs are just in terms  
4                   of -- well, let me say it hasn't escaped the attention  
5                   of some of us that it's the month of May and you are  
6                   here testifying and I would like start around the table  
7                   and invite each of you, if you could, to provide the  
8                   Board with some indication of what your companies are  
9                   actually doing at the present time on the renewal  
10                  programs both in terms of planting, seeding efforts?

11                  Mr. Waddell, could we start with yours,  
12                  please? And I'm talking about the FMA lands.

13                  MR. WADDELL: A. Yes. On our FMA lands  
14                  this year we will be planting 7.3 million bareroot and  
15                  container stock and we will be aerial seeding another  
16                  1,850 hectares of land.

17                  Q. Is that this year, Mr. Waddell?

18                  A. That is this year. Our tree planting  
19                  started on Monday.

20                  Q. And to what lands does that apply?

21                  A. That applies to the pine land FMA,  
22                  the Upper Spanish FMA and the lower Spanish FMA.

23                  Q. Mr. Squires, can you assist the Board  
24                  in the same way with respect to the current renewal  
25                  program of your company?



1 MR. SQUIRES: A. Yes, I can, Madam  
2 Chair. On the Spruce River Forest this spring we are  
3 currently beginning a 4.1 million tree plant program.  
4 Additionally, we have just finished aerial seeding of  
5 1140 hectares and we will shortly begin ground seeding  
6 an additional 250 hectares for a total of 1390 hectares  
7 of seeding.

8 Q. And on what lands are those being  
9 carried out?

10 A. That is on the Spruce River Forest  
11 FMA.

12 Q. And if we could take it a bit out of  
13 order then, Mr. Gemmell. What is Abitibi doing in your  
14 area of the world this year for its renewal program?

15 MR. GEMMELL: A. The Iroquois Falls  
16 Forest we begin planting trees next week, 7 million  
17 bareroot and container stock. That program will last  
18 until the end of June. And we have this year completed  
19 500 hectares of aerial seeding. And that's our program  
20 for this spring.

21 Q. Mr. Ferguson?

22 MR. FERGUSON: A. On the four FMA  
23 supplying Canadian Pacific Thunder Bay mill complex,  
24 our renewal program for 1990 involves the planting of  
25 11,153,000 trees, primarily container, some bareroot as

1 well.

2 Our seeding program for 1990 involves the  
3 seeding of 6,446 hectares and the planting is currently  
4 underway starting -- some of the plants starting this  
5 week and some other plants scheduled again next week.

6 Q. And on what lands are those  
7 activities to be carried out?

8 A. That would be on four FMAs; those  
9 four being the English River Forest, the Bright Sand  
10 Forest, the Dog River-Matawin Forest and the Black  
11 Sturgeon Forest.

12 Q. Thank you.

13 Mr. Waddell, in addition to the items  
14 that you've outlined with respect to planting and  
15 seeding, are there other components of, for example,  
16 E.B. Eddy's renewal program this year that do not  
17 involve artificial regeneration efforts?

18 MR. WADDELL: A. Yes, there are. We  
19 have a program of natural regeneration on certain  
20 areas, of course.

21 Q. Is that not the case for anyone on  
22 the Panel? Mr. Ferguson, Mr. Gemmell, Mr. Squires?

23 MR. FERGUSON: A. (nods)

24 MR. GEMMELL: A. (nods)

25 MR. SQUIRES: A. (nods)

1                   Q. Could I ask you then, gentlemen,  
2 again as a Panel, to consider a number of other general  
3 questions, and perhaps again we could go around the  
4 tables, where appropriate.

5                   First, as a general matter, is it  
6 appropriate in your views, based on your experience  
7 with renewal activities, to develop and utilize one or  
8 more set prescriptions to apply across the area of the  
9 undertaking for each species for which you manage?

10                  Mr. Waddell, could we start with you?  
11 Would that be appropriate or inappropriate in your  
12 view?

13                  MR. WADDELL: A. I believe it would be  
14 inappropriate. As we have tried to indicate the area  
15 of the undertaking as vast. There are many and diverse  
16 conditions prevailing across the area of the  
17 undertaking and I don't believe that it is appropriate  
18 to consider one set -- one application of any technique  
19 as being valid across the board.

20                  I think what you are referring to,  
21 Ms. Cronk, is the cookbook approach, as Dr. Baskerville  
22 indicated in his report, and if that is what you are  
23 suggesting to us, in my opinion it's totally  
24 inappropriate.

25                  Q. Let me provide you, Panel, with some

1 examples and ask for your comments.

2 Mr. Gemmell, as I understand it, based on  
3 your evidence before the Board, you have been involved  
4 in the course of your career in managing the black  
5 spruce.

6 MR. GEMMELL: A. That's right.

7 Q. Based on your experience, is there  
8 any silvicultural basis for the proposition that the  
9 management of black spruce should be restricted to  
10 stripcuts with strips no wider than two times the  
11 height of the tree?

12 A. No, that's extremely restrictive and  
13 on many of our sites it would not be successful. Just  
14 as an example, the uplands clay sites are quite  
15 productive and there's a great deal of competition on  
16 those sites.

17 The purpose of the narrow stripcuts is  
18 for natural regeneration from seed. The seed -- the  
19 results from that natural seeding would be very poor  
20 because of the heavy competition. So as we have put in  
21 our silvicultural prescriptions, there are a number of  
22 alternatives by sight because of the variation in the  
23 renewal effort.

24 Q. Mr. Squires, do you have experience  
25 in the course of your career in managing black spruce?



1 MR. SQUIRES: A. Yes, I do.

2 Q. Do you agree or disagree with the  
3 observations just made by Mr. Gemmell?

4 A. I totally concur.

5 Q. Mr. Gemmell, still dealing with black  
6 spruce. Again, based on your experience, is there, in  
7 your view, any silvicultural basis for the suggestion  
8 that on less productive sites the management of those  
9 sites should be restricted to the use of stripcuts, in  
10 this instance with strips no wider than one and a half  
11 times tree height?

12 MR. GEMMELL: A. Again, even in our  
13 renewal program that we illustrated to the Board last  
14 week, there are a number of alternatives and all these  
15 alternatives have been used and -- for renewal  
16 purposes, all of them have been successful.

17 So there are a number of alternatives and  
18 each alternative has good and bad points and there  
19 should be flexibility to relate those programs to the  
20 specific sites and conditions.

21 Q. Mr. Squires, do you agree or disagree  
22 with the observations made by Mr. Gemmell?

23 MR. SQUIRES: A. I would also agree with  
24 that point Mr. Gemmell has made.

25 Q. Again, based on your experience in

1 the management of black spruce, Mr. Gemmell, is there  
2 any silvicultural basis for the suggestion that  
3 management of that species should require involvement  
4 of a minimum a 3-coupe strip system?

5 MR. GEMMELL: A. No. Again, we've  
6 indicated that renewal of black spruce is excellent  
7 on -- even on clearcuts. We've illustrated alternative  
8 stripcuts, group seed trees and clearcuts, and in all  
9 cases there have been good results. The black spruce  
10 does best under full sunlight and therefore the 3-coupe  
11 system is not an appropriate method.

12 Q. I would like to deal, gentlemen, with  
13 a number of species. If I could turn now to white  
14 spruce.

15 Mr. Nicks, do you have any experience in  
16 the management of white spruce?

17 MR. NICKS: A. Yes, I do.

18 Q. Is there, based on your experience,  
19 any silvicultural basis for the proposition that  
20 management of that species should be conducted only by  
21 the seed tree method or, again, by only the stripcut  
22 method?

23 A. No, I have reservations about both  
24 methods, starting with the stripcut method first.

25 White spruce rarely, in my experience, occurs in pure

1 stands so the stripcutting option is basically  
2 infeasible in my experience.

3 The problem with the seed tree option is  
4 that the seed crops of white spruce are periodic in  
5 nature developing at intervals of five to ten years,  
6 and therefore to rely on seed trees would be extremely  
7 risky. There would be major harvest scheduling  
8 problems in terms of anticipating a senior moving  
9 equipment into the site, forming the harvest cut and  
10 site preparation and moving out. Logistically, it's  
11 virtually impossible.

12 The preferred approach, which we have had  
13 significant success with on the pine land FMA, is that  
14 of corridoring with D7 tractors in residual white birch  
15 stands where white spruce is normally found. And there  
16 we simply create strips through the stand, plant white  
17 spruce, bareroot stock under partial shade which it  
18 requires for protection from frost and weevil, and when  
19 white spruce has become established in a situation, we  
20 then ground apply very carefully around each tree  
21 herbicides to release the immediate competition while  
22 still leaving the overstory intact. We have had  
23 excellent results with this and we are getting stocking  
24 which would be much higher than would be possible with  
25 the seed tree method.

1 Q. Is it possible, Mr. Nicks, to  
2 regenerate white spruce successfully by planting  
3 efforts?

4 A. Absolutely, yes.

5 Q. Still dealing with you, Mr. Nicks,  
6 could I turn to jack pine. Is there any silvicultural  
7 basis in your experience for the proposition that  
8 management of jack pine be restricted to the use of  
9 clearcuts of less than 100 hectares in size?

10 A. No, there is no basis in my  
11 experience for that statement. The proposition perhaps  
12 behind the restriction of those clearcuts would be to  
13 guard against the repression and growth or density,  
14 say, of seeded areas and I have not seen any examples  
15 of that. Mr. Ferguson, I think, clearly illustrated  
16 even in a very large clearcut good success can be  
17 achieved.

18 Q. Mr. Waddell, what is your view on  
19 that proposition; that is, that management of jack pine  
20 be restricted to the use of clearcuts of less than 100  
21 hectares in size?

22 MR. WADDELL: A. I concur with what  
23 Mr. Nicks has said, and in my experience in working  
24 with jack pine I know of no silvicultural reason to  
25 restrict the size of the cut of jack pine in terms of



1 your ability to regenerate a future crop. And I would  
2 like at this time, Ms. Cronk, to quote from the  
3 silvicultural guidelines from the Ministry of Natural  
4 Resources, if I may.

5 Q. For?

6 A. For jack pine.

7 MS. CRONK: Madam Chair, I don't believe  
8 that document has yet been marked before the Board as  
9 an exhibit and I would like to tender it now, if I  
10 could, as the next exhibit.

11 Do you have a copy of it, Mr. Waddell?

12 MR. WADDELL: No, I don't have a copy of  
13 it, Ms. Cronk.

14 MADAM CHAIR: That will be Exhibit 1153.

15 MS. CRONK: I'm sorry, Madam Chair?

16 MADAM CHAIR: 1153.

17 ---EXHIBIT NO. 1153: Extract from the Silvicultural  
18 Guideline Series from the  
19 Ministry of Natural Resources.

20 MR. WADDELL: Madam Chair, as you are  
21 aware, this silvicultural -- there is a Silvicultural  
22 Guide Series produced by the Ministry of Natural  
23 Resources sometimes with Industry involvement.

24 This particular series or this particular  
25 book is for the jack pine working group and I would ask

1 if you would turn to Page 15 under 3.1, "Silvicultural  
2 Systems", and with your permission I would like to read  
3 the first two paragraphs:

4 "The silvics of jack pine requires a  
5 type of harvesting that creates an  
6 aftereffect similar to the devastation  
7 following a forest fire; therefore, jack  
8 pine is managed exclusively under the  
9 Clearcut silvicultural system. This  
10 system involves the harvesting of a  
11 forest and single operation which removes  
12 most of the vegetation from the area and  
13 creates the ideal conditions for the  
14 establishment and survival of a new  
15 natural or artificially regenerated  
16 forest crop. The Boreal Forest, for  
17 example, is a generally homogeneous  
18 forest of even-aged stands of  
19 intolerant coniferous or deciduous  
20 species which is best managed using the  
21 Clearcut system.

22 "Since the last glacial period,  
23 extensive fires have swept this forest  
24 about every 100 to 150 years continually  
25 - recreating the ideal growing conditions

1                   for its regeneration. Clearcut logging  
2                   disturbances can create similar growing  
3                   conditions for regeneration."

4                   I think that puts our situation very  
5                   succinctly. In our opinion, and obviously in the  
6                   opinion of the authors of this particular Silvicultural  
7                   Guide Series for jack pine, we believe that the  
8                   clearcut system is the proper silvicultural system for  
9                   the renewal of jack pine and there is no biological  
10                  reason, in our opinion, that the size of the clearcut  
11                  should be limited for renewal purposes.

12                  MS. CRONK: Q. Mr. Ferguson, based on  
13                  your experience in the management of jack pine, first,  
14                  do you agree or disagree with the observations  
15                  expressed by Mr. Waddell.

16                  MR. FERGUSON: A. I would have to agree  
17                  totally.

18                  Q. Based on your own experience, is  
19                  there anything you wish to add?

20                  A. My own experience has been that I  
21                  have no recollection of any observation whereby the  
22                  renewal of jack pine has been adversely effected by the  
23                  size of the clearcut. If anything, the smaller  
24                  clearcuts and jack pine may have some problems in  
25                  re-establishing the jack pine; the larger clearcuts

1 simply do quite well.

2 Q. Mr. Nicks, if I could return to you.  
3 Still dealing with jack pine, based on your experience,  
4 is there any silvicultural basis in your view for the  
5 proposition that if full-tree harvesting methods are  
6 used with respect to jack pine, that management of that  
7 species should be restricted to the use of strips no  
8 wider than two times the tree height?

9 MR. NICKS: A. I can think of no basis  
10 for that recommendation. We've been using full-tree  
11 harvesting in our limits for -- well, since before I  
12 arrived with the company anyway, which was five years  
13 ago. And in my previous experience with the MNR,  
14 full-tree harvesting was used for jack pine starting  
15 about 1980 and we have had very successful results in  
16 both areas in terms of either planting or seeding jack  
17 pine.

18 Q. Mr. Waddell, do you agree or  
19 disagree? What is your view on that proposition that  
20 I've put to Mr. Nicks?

21 MR. WADDELL: A. Identical to the  
22 opinions expressed by Mr. Nicks. I feel that in most  
23 areas, particularly in northeastern region and then in  
24 the northern region, any type of natural regeneration  
25 for jack pine has proven to be somewhat unsuccessful,



1 and, again, I would like to quote from Exhibit 1153,  
2 page 20, about the eighth line down beginning with the  
3 indented paragraph.

4 "The Ministry, northern and  
5 northeastern region have had little  
6 success with natural regeneration.  
7 Results, however, as one moves westward  
8 across the province improves."  
9 And that has certainly been our  
10 experience in the northern and northeastern region. It  
11 is extremely difficult to get natural regeneration to a  
12 proper level and by inhibiting the size of your  
13 clearcut is only going to make it more difficult.

14 Q. Mr. Nicks, have you had experience in  
15 the management of the white pine?

16 MR. NICKS: A. Yes, I have.

17 Q. Mr. Murray, have you as well?

18 MR. MURRAY: A. Yes, I have.

19 Q. Mr. Nicks, starting with you, based  
20 again on your own experience, is there any  
21 silvicultural basis for the proposition that management  
22 of white pine should be restricted to the use of  
23 uniform shelterwood cuts?

24 MR. NICKS: A. Not as a uniform  
25 approach. It's certainly a valuable system in certain

1 areas, principally, where there is sufficient basal  
2 area or stocking of white pine to begin with,  
3 relatively pure stands of one that is documented in the  
4 MNR's silvicultural guide for red and white pine as  
5 well.

6 The situation on our FMAs through most of  
7 the northern part of the area of the undertaking is the  
8 white pine occurs on ridge tops and as scattered  
9 individuals or in clumps, and there is not the canopy  
10 of white pine there to practice uniform shelterwood  
11 with, so one must utilize alternative methods which can  
12 also be quite successful.

13 For example, in our lower Spanish Forest,  
14 we have a policy for managing white pine, the white  
15 pine working group. We -- the intention being --  
16 potentially leave a minimum of 25 white pine seed trees  
17 per hectare and in other stands with a white pine  
18 component we harvest on a diameter limit, a  
19 40-centimetre diameter limit on white pine to make sure  
20 that there is a component of white pine in the  
21 resulting stand. We also grow and plant 100,000 red  
22 pine per year on the lower Spanish and starting next  
23 year we'll be growing 50,000 white pine as well in the  
24 lower Spanish Forest.

25 Q. Thank you, Mr. Nicks.

1                   Mr. Murray, based on your experience in  
2                   the management of white pine, what is your opinion as  
3                   to whether there is any silvicultural basis for the  
4                   proposition that management of white pine should be  
5                   restricted to the use of uniform shelterwood cuts?

6                   MR. MURRAY: A. In my opinion, I agree  
7                   with Mr. Nicks. My experience in the Sioux Ontario  
8                   region would reinforce his comments about the leaving  
9                   of scattered trees for a seed tree on a diameter or on  
10                  a selected seed tree system, and I agree with what he  
11                  has said, yes.

12                  Q. Mr. Nicks, you mentioned red pine in  
13                  the course of your remarks regarding the management of  
14                  white pine. Do you as well have experience in the  
15                  management of red pine?

16                  MR. NICKS: A. Yes, I have some  
17                  experience, not a great deal.

18                  Q. Mr. Ferguson, do you have experience  
19                  in the management of red pine?

20                  MR. FERGUSON: A. Yes, some through the  
21                  activities of third party operation -- on the  
22                  activities of a third party operator on the English  
23                  River Forest.

24                  Q. Mr. Ferguson, then, if I could put  
25                  the question initially to you: Would it be appropriate

1 in your view on a silvicultural basis for the  
2 management of red pine to be restricted to the use of  
3 uniform shelterwood cuts?

4 A. No, I would not agree that that would  
5 be appropriate in all cases. I am aware of several and  
6 very successful plantations of red pine in northwestern  
7 Ontario, very successful particularly on the Dryer  
8 site.

9 I'm also aware of the leaving of seed  
10 trees with some site preparation near the base of the  
11 seed trees and very successful red pine regeneration  
12 through that method as well. I would say that the  
13 shelterwood methods would be inappropriate in some  
14 cases.

15 Q. Mr. Nicks, based on the experience  
16 which you have had -- I recognize that you indicated it  
17 was limited -- do you agree or disagree with the  
18 observations made by Mr. Ferguson?

19 MR. NICKS: A. I agree completely.

20 Q. Could I turn to poplar, gentlemen.

21 Mr. Waddell, have you had experience  
22 managing for poplar in the area of the undertaking?

23 MR. WADDELL: A. Yes, I have.

24 Q. Is there, in your experience, any  
25 silvicultural basis for the proposition that managing



1 for -- that in the management of poplar, the use of  
2 clearcuts should be restricted to clearcuts of less  
3 than 50 hectares in size?

4 A. If your objective is to renew a crop  
5 of poplar, there is no validity in such a statement.  
6 The problem in most cases is to try to keep the poplar  
7 back, and the size of the clearcut has absolutely  
8 nothing to do with the renewal. In fact, the larger  
9 the clearcut probably the better the renewal of poplar  
10 you'll get as it is a sun-loving species and it comes  
11 in very vigorously following a cut-over.

12 So, no, the size of the cut would not  
13 impede the growth -- the regrowth and the suckering of  
14 poplar in any way.

15 Q. I have in mind the nature of the case  
16 study, Mr. Waddell, that you and Mr. Nicks described to  
17 the Board, and on blocks A to D of that case study, you  
18 were not managing for poplar.

19 Within E.B. Eddy FMA areas have you had  
20 and do you have personal experience in managing for  
21 poplar as opposed to jack pine?

22 A. On some sites that are mixed with  
23 stands to begin with that are similar to the blocks in  
24 the case study where we judge that the amount of  
25 residual poplar is very high following the removal of

1 the softwood, we allow that area to regenerate  
2 naturally back to poplar and there is no problem  
3 whatsoever in regenerating those areas to poplar  
4 regardless of how large the cut may be.

5 Q. My next question, gentlemen, pertains  
6 to tolerant hardwoods, and, Mr. Murray, it will come as  
7 no surprise to you that the question is directed to  
8 you.

9 Is there, based on your experience, any  
10 silvicultural basis for the proposition that the  
11 management of tolerant hardwoods should be restricted  
12 in all cases to the use of shelterwood or selection  
13 cutting, those two?

14 MR. MURRAY: A. Ms. Cronk, the tolerant  
15 hard wood -- the uniform and shelterwood system are the  
16 preferred specie in the -- the preferred silvicultural  
17 system. There is no silvicultural basis for a  
18 statement that they should be the only method of  
19 treatment of the tolerant hardwood.

20 There are cases in the tolerant hardwood  
21 where the stand will not meet the criteria for  
22 selection and/or uniform shelterwood management, and in  
23 those cases the forester identifying the correct  
24 management system must have the flexibility of, in this  
25 case, utilizing the clearcut system which would -- for

1 which the tolerant hardwood can be adapted and a  
2 successful forest regenerated.

3 So I have to say that the clearcut system  
4 is one that must be one of the options in the  
5 management of a tolerant hardwood.

6 Q. My next question pertains to site  
7 preparation and scarification. Mr. Nicks, you  
8 presented certain evidence to the Board regarding the  
9 Industry's involvement in site preparation activities  
10 in the area of the undertaking.

11 If it were proposed that site preparation  
12 be limited in the future to soils over three feet in  
13 depth, would you regard that as appropriate or  
14 inappropriate from a silvicultural perspective?

15 MR. NICKS: A. I would regard that as  
16 highly inappropriate. For one thing, it would restrict  
17 the amount of land base available to regenerate and  
18 have serious wood supply consequences.

19 From a biological standpoint, I can think  
20 of no reason to limit site preparation on the basis of  
21 a depth of three feet or one metre. The significant  
22 aspect of soils, I believe, is texture and slope in  
23 regard to site preparation, not depth.

24 A shallow soil which is level and sandy  
25 can be site prepared quite effectively with minimal

1 impact using patch scarifiers or disk trenchers so I  
2 think it is an overly restrictive rule to suggest.

3 Q. If I substituted the word  
4 "scarification" for the word "site preparation" in that  
5 question, would your views be different in any way?

6 A. Well, my understanding of the term  
7 scarification and I think one that is used -- the  
8 understanding in the forestry community is that it  
9 involves -- it's a subset of site preparation activity  
10 in that it usually implies natural regeneration to  
11 follow.

12 For example, scarification of jack pine  
13 for natural involves site preparation with drags to  
14 expose mineral soil and to draw the hole bearing slat  
15 back over the exposed furrows. So the two aren't  
16 really synonymous in my mind.

17 The same comments would apply to  
18 scarification as I provided regarding site preparation.

19 Q. Dealing with regeneration, generally,  
20 Mr. Squires, you presented evidence to the Board with  
21 regard to the Industry's perspective on regeneration  
22 options if it were proposed that regeneration should in  
23 the future have, as its purpose, the achievement of  
24 stands equal to or superior to the stands harvested  
25 with respect to species and density. Would you regard



1 that as appropriate or inappropriate? Are you clear on  
2 the question?

3 MR. SQUIRES: A. I think I am. You can  
4 help me rephrase it.

5 Q. If it were proposed that regeneration  
6 in the future have as its purpose be intended to  
7 achieve stands equal to or superior to the stands  
8 harvested with respect to species and density, would  
9 you regard that as appropriate or inappropriate?

10 A. I'm going to ask you to rephrase it  
11 because I read it --

12 Q. Sorry. It occurred to me as I put  
13 the question to you that it wasn't as clear as it might  
14 have been. So let me put it again.

15 If it were proposed that in the future,  
16 regeneration should have as its purpose the achievement  
17 that stands equal to or superior to the stands  
18 harvested with respect to the species and density,  
19 would you regard that as appropriate or inappropriate  
20 based on your experience with regeneration?

21 A. Ms. Cronk, I have difficulty with any  
22 prescription that restricts me in any regard. I prefer  
23 to approach any situation on the basis of the site and  
24 the stand and make any prescription according as to  
25 what is found out there in the bush. So in that

1 regard, I'm still having problems with the question.

2 Q. I would ask you to accept this  
3 hypothetical for a moment, Mr. Squires. When you go in  
4 and harvest a stand as an Industry timber manager, the  
5 stand has certain characteristics in terms of species  
6 that are present and in terms density. Do you accept  
7 that?

8 A. Yes.

9 Q. If I were to suggest to you or if  
10 someone else were to suggest to you that in the future  
11 when you regenerate that stand which you harvested, the  
12 object of your regeneration should be to match or  
13 improve on what was originally there in terms of  
14 species and density.

15 What would your views as a forester be as  
16 to whether that is an appropriate objective of  
17 regeneration?

18 A. Personally, I don't think it's  
19 appropriate in that, again, as I said, I am too  
20 restricted in that regard.

21 If I'm asked to regenerate that stand  
22 according to a particular species -- height, yield --  
23 yes, I can do it, but I'm having problem with the  
24 motive.

25 Q. Mr. Nicks, what is your view of that

1 proposition?

2 MR. NICKS: A. Well, I'm having the same  
3 difficulty in the sense that it's not wise necessarily  
4 to allocate resources equally to all sites or to  
5 improve the level of production on all sites. To me,  
6 it makes much more sense to improve the yield and the  
7 investment on sites which are productive, the most  
8 productive, and the sites that are less productive, it  
9 may be inappropriate.

10 As Mr. Waddell has indicated, where there  
11 is a heavy poplar residual component, to expend large  
12 sums of money to improve the yield of jack pine, it may  
13 not be necessary in wood supply scenario for the  
14 management unit.

15 Q. Thank you.

16 And, Mr. Waddell, if I could put another  
17 general proposition to you. If it were proposed that  
18 for plantations particularly -- let's deal in  
19 particular with plantations. If it were proposed that  
20 the collection of survival data five years after  
21 planting be mandatory in light of the evidence you've  
22 given to the Board, would that be, in your view,  
23 appropriate or inappropriate?

24 MR. WADDELL: A. I suppose, Ms. Cronk,  
25 it depends upon what the purpose of the collection of

1 the data is, but from a silvicultural purpose, I feel  
2 that would be inappropriate.

3 I don't think, as we have tried or I have  
4 tried to outline on behalf of the Industry, I think the  
5 mandatory imposition of any requirement for survival  
6 data tied to a year is inappropriate for the reasons  
7 that we have tried to outline, and basically they are  
8 that each manager has different needs, different  
9 concerns and he collects -- he should be allowed to  
10 have the flexibility to collect the survival data at a  
11 time that best fits the particular needs that he has on  
12 that particular site at that particular time, and,  
13 therefore, I would have to suggest to you that  
14 fifth-year collection on a mandatory basis of survival  
15 data would be inappropriate.

16 There may be particular managers at a  
17 particular time that would want to do it, and that is  
18 fair enough in their particular case, but on a  
19 mandatory basis across the area of the undertaking, no,  
20 in my opinion, it would be inappropriate.

21 MR. MARTEL: Could I ask a question?

22 MS. CRONK: Certainly.

23 MR. MARTEL: To satisfy the public,  
24 Mr. Waddell, who have invited a concern in the money  
25 being spent and who wants some form of knowledge of



1 what is going on out there, out in the forest, how do  
2 you resolve satisfying their concerns about the money  
3 they are spending in order to have a proper  
4 regeneration if we don't -- not some form of a  
5 mechanism for reporting to them as to what in fact is  
6 occurring? And that is a real concern, I think, of  
7 people.

8 MR. WADDELL: Yes, Mr. Martel, I  
9 certainly recognize your point.

10 I would suggest that if we could put it  
11 in terms of acres of successful regeneration, that that  
12 might be an appropriate reporting mechanism; in other  
13 words, at the end of the fifth year when we do our  
14 stocking assessments and we all have formally agreed to  
15 stocking requirements in our FMAs and the ground rules.  
16 For example, if E.B. Eddy could report that or was  
17 required to report that in 1990 our fifth-year stocking  
18 assessments were completed and we have successfully  
19 regenerated 5,000 hectares of the 5,120 that we  
20 attempted to do, would that answer the concerns of the  
21 public?

22 MR. MARTEL: Well, I think it goes some  
23 way, but, again, you are dealing with a lay public.  
24 Having listened to two years of evidence, I have a  
25 little better knowledge than I had two years ago what

1 is going on out there, but to the lay public it's going  
2 to have to be in terms that they understand, and I'm  
3 not sure stocking densities mean a whole lot to them,  
4 or survival.

5                   There has got to be some form of  
6 mechanism, I think -- that's a personal opinion at this  
7 stage of the game -- that indicates to the public the  
8 success rate. Without that, I think that you'll have a  
9 public that is suspicious always.

10                   MR. WADDELL: You indicated success rate,  
11 though. Could I try once more to suggest that if the  
12 stocking standards were agreed to as they are now up  
13 front, and provided that the FMA company attains those  
14 standards at the end of year five, then we  
15 collectively, the Industry, the Ministry and the  
16 public, would agree that those acres would have been  
17 successfully regenerated. Would that answer the  
18 concern of the public?

19                   MR. MARTEL: Well, I think if you give  
20 the public something that says; Well, we've achieved a  
21 40 per cent stock in density -- I guess that's the term  
22 you want to use -- and that has been successful, or it  
23 is considered successful, I don't think the public, on  
24 what it has at the present time would look at that and  
25 say it's successful. They would say: Wait a minute,

1 what's happened? Just thinking the way the public  
2 would think, they are going to say: What has happened  
3 to the other 60 per cent?

4 From my vantage point, at least, that  
5 would be the first question that would come to their  
6 mind. If it's only 40 per cent, and again it's a case  
7 of maybe education, but if you are saying it's --  
8 you've achieved 40 per cent and that's what MNR has  
9 determined it has to be, that you are going to have a  
10 public that is going to be cynical because they are  
11 going to say look -- just in pure mathematical terms,  
12 they are going to say: What has happened to the other  
13 60 per cent.

14 MS. CRONK: Mr. Martel, if I could,  
15 perhaps in an effort to assist, would pursue this in an  
16 evidentiary way with further questions to Mr. Waddell  
17 and the other panel members, and I would point out,  
18 sir, that the concern you've expressed is going to be  
19 addressed both in argument and by the Industry's  
20 planning panel in an evidentiary sense. You will be  
21 hearing future evidence from this party on that issue  
22 on how those concerns are to be met before the end of  
23 the day.

24 Q. But, Mr. Waddell, addressing the  
25 point that Mr. Martel has raised, do you, based on your

1 experience in the area of the undertaking both in  
2 managing the timber resource and dealing with the  
3 public in the course of doing that, do you support the  
4 need for keeping the public informed as to the success  
5 rate of what the Industry is doing in the area of the  
6 undertaking?

7 MR. WADDELL: A. I would have to ask you  
8 to define what the success rate is, Ms. Cronk, because  
9 I'm not sure what you mean by that success rate.

10 Q. Maybe I deserved that.

11 Just as a general proposition,  
12 Mr. Waddell, in terms of the performance by the  
13 Industry of its obligations under the FMA program, do  
14 you support the concept that that information; that is,  
15 whether performance has been successful or not in terms  
16 of the FMA program should be made available to the  
17 public, or can you answer it on that general basis?

18 A. Absolutely. I think I can speak on  
19 behalf of the Industry on that. It is public lands  
20 that we are working on and we have taken a contractual  
21 obligation to reforest the productive forest lands and  
22 we are doing that. I think what we are talking about  
23 here is the measure of how we report that.

24 Q.- And with respect to the suggestion  
25 that a measure of reporting should be the mandatory



1 collection and reporting of survival data, was your  
2 evidence directed to the forester's perspective on the  
3 usefulness of that data or on the issue of what are  
4 appropriate reporting mechanisms, or were you talking  
5 about both? What was your evidence focused on with  
6 respect to survival data?

7 A. Well, I'm going to have to be like  
8 Mr. Squires and ask you to rephrase that question,  
9 please.

10 Q. When you gave your evidence to the  
11 Board with respect to the usefulness of survival data,  
12 were you looking at it from the perspective of  
13 usefulness in terms of what the information means or  
14 were you thinking about it in terms of a reporting  
15 mechanism or both?

16 A. I was essentially speaking --  
17 outlining the Industry's concerns about the mandatory  
18 collection of second year, specifically second year  
19 survival data, in terms of its usefulness from a  
20 forester's viewpoint in measuring the relative success  
21 of a plantation. I was not particularly speaking about  
22 it or referring to it as a measure of how the Ministry  
23 or how the Industry might report to the public.

24 MS. CRONK: Mr. Martel, I propose to  
25 leave it there and deal with it further. I propose to

1 leave it there and to deal with it further for our part  
2 with the planning witnesses who will be appearing  
3 before you.

4 MR. MARTEL: That's fine. It's just a  
5 concern I have.

6 MS. CRONK: Your concerns are our  
7 concerns.

8 MADAM CHAIR: One question for  
9 Mr. Waddell, Ms. Cronk, and that is: You've just gone  
10 over your reasons why you don't see second year  
11 survival data as being particularly useful as a  
12 mandatory provision, and I assume that you would see  
13 them less used for fifth year survival data in the  
14 -sense that they would be redundant because of the  
15 stocking information that you collect anyway?

16 MR. WADDELL: That's partially true, and  
17 as we've indicated earlier the survival in the fifth  
18 year probably would be only slightly less than the  
19 survival in the second year and there is a logistics  
20 problem in maintaining your survival plots from year  
21 two to year five in that each individual tree has to  
22 depend and identify in some manner, and when you come  
23 back there in year five it's often very difficult on a  
24 large scale basis to find those individual trees and,  
25 of course, if you don't find them all then you are

1 sample loses some of its validity.

2 People have been known to go through and  
3 pull out your pins, for example, animals sometimes  
4 disturb them. So over a five-year period it's that  
5 much more difficult to maintain the accuracy of your  
6 sample.

7 MADAM CHAIR: Thank you.

8 MS. CRONK: Q. Mr. Squires, yesterday  
9 there was a question raised concerning the suggestion  
10 of a three-million surplus in seedlings in the area of  
11 the undertaking. Was there a surplus of three-million  
12 seedlings that you are aware of?

13 MR. SQUIRES: A. The question was coming  
14 from Mr. Martel, I believe, and got into the press.  
15 That was quoted in the press, but I personally believe  
16 that the number was probably expected, and I did have  
17 communication at that time with the district manager at  
18 Thunder Bay and queried him about the "surplus", and  
19 his reaction to me was that this was not a surplus,  
20 there were trees in the nursery that had been carried  
21 over year and he described them as 'feet tall', meaning  
22 they are much too large. So they would be just  
23 "surplus", but not useful.

24 Additionally, there were some trees that  
25 were undersize as a part of normal nursery routine.

1       These are seedlings that are in seedbeds and that would  
2       be ordinarily scheduled for putting into transplant  
3       beds, but because they have had a particularly good two  
4       years in a row for survival in seebeds, they have  
5       "surplus" in that area and there was no point in  
6       transplanting them, to spend additional money on them.

7                   Q.   And that was in, you say, Thunder  
8       Bay?

9                   A.   Yes, that was in Thunder Bay.

10                  Q.   When was that?

11                  A.   That was the spring of 1989.

12                  Q.   Mr. Waddell, could I turn then  
13       finally to you, sir, and ask whether there are any  
14       concluding observations on behalf of the Panel which  
15       you wish at this time and ask whether there are any  
16       concluding observations at this time which you wish to  
17       offer to the Board on behalf of the Panel with respect  
18       to the involvement of the Industry in the renewal  
19       activities in the area of the undertaking?

20                  MR. WADDELL:   A.   Yes, Madam Chair.  On  
21       behalf of our Panel I would like to make a concluding  
22       statement at this time.

23                  In 1980, the first forest management  
24       agreements initiated the transfer of timber management  
25       responsibilities including renewal to the Industry.  An



1 analysis of the results of the renewal activities  
2 conducted by the forest management agreement holders in  
3 1988 indicates clearly that the program has been a very  
4 successful one, particularly where artificial  
5 regeneration methods have been used.

6 It is therefore the position of the  
7 Industry that our obligations under the terms of the  
8 forest management agreements to keep production forest  
9 lands reforested in accordance with the ground rules  
10 are being met.

11 It is also our contention that Industry  
12 staff have proven their competence and their commitment  
13 to the challenge of reforesting harvested lands despite  
14 the wide variety of sites and conditions that we deal  
15 with across the area of the undertaking.

16 It is also our contention that this rapid  
17 and successful regeneration is beneficial to all users  
18 and to all needs. The Industry is confident of its  
19 continued ability to successfully conduct renewal  
20 activities in the future. However, we believe that our  
21 continued ability to do so is contingent upon three  
22 factors, and I would like to outline these to you with  
23 an overhead.

24 If you would, please, Mr. Ferguson.

25 Our ability to successfully conduct

1 timber renewal activities in the future will depend  
2 upon three critical factors.

3 First of all, as we have stressed, the  
4 early development with Industry participation of a new  
5 timber production policy and implementation schedule  
6 that will show what we will do and when.

7 Secondly, there must be an assurance of  
8 adequate and continuous renewal funding by the  
9 government.

10 And, third, certainly not the least  
11 important, is the maintenance of the timber manager's  
12 flexibility to continue to make informed, site-specific  
13 renewal decisions that best suit that particular site.

14 Those are our Panels' concluding remarks,  
15 Madam Chair. Thank you.

16 MS. CRONK: Thank you, Mr. Waddell.

17 Madam Chair, Mr. Martel, that concludes  
18 the direct evidence of this Panel and questioning from  
19 me. There is, however, one other matter that I wish to  
20 deal with on behalf of the OFIA/OLMA at this time in  
21 response to a question that was raised during the  
22 scoping section for Panel 8.

23 The question was raised by the Board at  
24 that time whether the OFIA/OLMA will be presenting  
25 evidence at this hearing regarding the timber

1 production capacity of the area of the undertaking as  
2 set out and with reference to the 1972 forest  
3 production policy. The Board will recall issue being  
4 raised.

5 I understood the question then and now to  
6 relate to the volume target, the productive capacity of  
7 the area of the undertaking set out in that 1972  
8 policy, and there was discussion at that scoping  
9 session, reference was made to the 9.1 million cunits  
10 referred to by the year 2020 in the 1972 forest  
11 production policy.

12 I wish to outline and to advise the Board  
13 at this time the position of the OFIA/OLMA on this  
14 matter.

15 It is first for the assistance of the  
16 Board, to remind the Board that you have received some  
17 evidence on this issue already from Industry witnesses,  
18 namely, Mr. Nick Sultarelli on Panel 3, and I would,  
19 for your future assistance, refer you to portions of  
20 the transcript of Mr. Sultarelli's evidence beginning  
21 at pages 32,950 and following, and 33,234 and  
22 following. I have some difficulty getting 32,000 and  
23 33,000 out of my mouth when I refer to a transcript,  
24 but those are the pages that follow -- 32,950 and  
25 33,254 and following.

1                   That is a portion of Mr. Sultarelli's  
2                   evidence in-chief to Mr. Cassidy and a portion of his  
3                   cross-examination evidence with Mr. Lindgren, but I  
4                   wish to be of as much assistance to the Board as I can  
5                   and make the position of the OFIA/OLMA clear on this  
6                   issue.

7                   The associations which we represent,  
8                   Madam Chair, Mr. Martel, are not in a position to  
9                   assist you on a provincial production number and that  
10                  is not -- that is factually the case and I say that to  
11                  you in light of the following facts: First, as the  
12                  Board, of course, is aware, there are members of the  
13                  sawmill and pulp and paper industry that are not  
14                  members of the OFIA/OLMA. That is the first matter.

15                  Secondly, and perhaps of greater  
16                  importance in this context, the Industry is not  
17                  responsible for wood supply and timber management  
18                  activities throughout the entirety of the area of the  
19                  undertaking. You've now received evidence, and I make  
20                  no comment on it, but you have received evidence  
21                  regarding the Industry's role with respect to Crown  
22                  management units, for example.

23                  They cannot give you evidence, factually  
24                  or otherwise, with respect to experience across the  
25                  whole of the area of the undertaking. That is the



1 function of the government agency who bears  
2 responsibility, in our submission, for management of  
3 the entirety of that resource. And you have heard Mr.  
4 Sultarelli's evidence about the objective of the timber  
5 production policy, the new one, as Industry sees it.  
6 You've now received evidence as to why these witnesses,  
7 the Ministry perceives them as necessary.

8 And so the answer to the question raised  
9 by the Board is: I can only reaffirm as counsel that  
10 certain of the matters that were outlined to you by  
11 Mr. Sultarelli and to indicate with respect to the 1972  
12 forest production policy and the total productive  
13 capacity of the entirety of the area of the  
14 undertaking, the question is directed to the wrong  
15 party.

16 I regret that that is the case and I wish  
17 the Board to know that so there was a response before  
18 you on all questions posed to you before this direct  
19 examination concluded.

20 I don't know whether the Board wishes now  
21 to rise in light of what you told me with respect to  
22 the reporter at the beginning of the morning, Madam  
23 Chair, but that does conclude the questions I have.

24 MADAM CHAIR: Yes. Thank you for your  
25 comments, Ms. Cronk, on that.

1                   So presumably when the OFIA participates  
2                   with the Ministry of Natural Resources in some fashion  
3                   in designing and developing the new timber production  
4                   policy, they won't have anything to do with setting a  
5                   numerical target in terms of what that capacity will  
6                   be.

7                   MS. CRONK: I didn't say that and I don't  
8                   know that, Madam Chair. I can tell you that it's  
9                   certainly -- the Industry does not regard it as its  
10                  business nor its expertise to set an overall provincial  
11                  target, it cannot do so.

12                  You should, perhaps in this context,  
13                  consider the matter and in many instances individual  
14                  companies know what their needs are, but they have no  
15                  idea what factors are going to influence that supply in  
16                  the future.

17                  There is a whole combination of factors,  
18                  and I certainly don't purport to be, in responding to  
19                  your question, a wood supply expert, and you can pursue  
20                  this, if you wish, with these witnesses.

21                  I can tell you that Industry wishes to be  
22                  involved because they have a perspective, and based on  
23                  their experience they hopefully will have a  
24                  contribution to make in finalizing that policy.

25                  To put the matter in the way that you

1 have, they won't be setting any professional targets,  
2 they can't.

3 MADAM CHAIR: I think what the Board has  
4 to take from the evidence of this Panel in terms of  
5 renewal is that regardless of the level of harvesting  
6 activity or renewal in the future, your Panel's  
7 evidence to date is that the current level of renewal  
8 funding is insufficient?

9 MS. CRONK: That's correct, Madam Chair.

10 MADAM CHAIR: And that is what we'll take  
11 from that.

12 MS. CRONK: There may be other things  
13 that we will ask you at the end of the day to take from  
14 this evidence when you have heard it all, but certainly  
15 that is an element of it.

16 I can only say that I hope the Board  
17 understands the factual reality of the difficulty of  
18 the Ministry coming before you with an estimation of  
19 that kind of a number when they lack the information to  
20 provide it.

21 MADAM CHAIR: All right. Thank you, Ms.  
22 Cronk.

23 MS. CRONK: Thank you.

24 MADAM CHAIR: Ms. Swenarchuk, how much  
25 time do you need to -- is 10 minutes enough or would

1       you like a 20-minute break at this point?

2                   MS. SWENARCHUK: We would normally have  
3       it at ten o'clock.

4                   MADAM CHAIR: Let's take a 20-minute break  
5       now and we'll have a 10-minute break before noon at  
6       some point for the court reporter. Thank you.

7       ---Recess at 9:42 a.m.

8       ---On resuming at 10:04 a.m.:

9                   MADAM CHAIR: Please be seated.

10       Ms. Swenarchuk?

11                   I think given the closeness of this room  
12       that we can do away with our jackets and make ourselves  
13       comfortable for the rest of the day.

14       ---Discussion off the record.

15                   MS. SWENARCHUK: To begin, Madam Chair,  
16       you will recall that Mr. Nicks referred to a study  
17       yesterday with regard to clearcut size and I asked the  
18       study be produced to me. It was, but it didn't arrive  
19       at my home until 11:30 last night.

20                   I believe as soon as they received it, I  
21       received it, but it was that late. And so, of course,  
22       I haven't had an opportunity to discuss this with the  
23       consultant and I'm simply requesting with regard to  
24       that study I be permitted to return to it probably  
25       tomorrow, I would expect, otherwise the issue today --



1 and ask any additional questions of Mr. Nicks that  
2 arise from that statement particularly.

3 MADAM CHAIR: Yes. That's fine,  
4 Ms. Swenarchuk. We discussed last night the fact that  
5 this Panel will probably not be completed until next  
6 Monday evening or perhaps early Tuesday morning with  
7 re-examination.

8 MS. CRONK: I understood, Madam Chair, at  
9 least it's been reported to me what occurred at the  
10 scoping section, and I'm in some difficulty because  
11 I've not had any communication from the Anglers &  
12 Hunters. I did receive a letter -- today. My hope is  
13 this Panel will be completed on Monday, is what I wish  
14 to say to the Panel, but I don't know what it is they  
15 are intending to pursue, so we are planning on Monday  
16 and Tuesday morning, if necessary.

17 My hope is we will be recalling the  
18 attending Panel sometime Monday afternoon and we are  
19 working toward that objective.

20 MADAM CHAIR: And so, Ms. Swenarchuk,  
21 tomorrow you can take up the matter of this report and  
22 do so as expeditiously as possible.

23 MS. SWENARCHUK: Yes. If by any chance  
24 I'm not able to reach the consultant about that -- but  
25 that would be my plan.

1 I would like to begin by filing a number  
2 of interrogatories and I have them in two separate  
3 packages. One are additional interrogatories related  
4 to Panel 4 evidence, and the second is a set of  
5 interrogatories relating to Panel 8 evidence. I wonder  
6 if these could be the next exhibits.

7 MADAM CHAIR: Yes. The interrogatories  
8 referring to Panel 4 evidence will be Exhibit 1154, and  
9 the interrogatories with respect to Panel 8 evidence  
10 will be Exhibit 1155.

11 MS. CRONK: Could I just note for the  
12 record which they are, Madam Chair?

13 MS. SWENARCHUK: The interrogatories  
14 relating to Panel 4 are Forests for Tomorrow  
15 interrogatories 1A, B, C, D, E; questions 2, 13, 15,  
16 16, 19, 21, 24, 26, 27.

17 Exhibit 1155, the Panel 8  
18 interrogatories, are from Forests for Tomorrow, No. 1,  
19 2, 5, 9, 10, 11, 22; Ministry of Environment, No. 3;  
20 Forests for Tomorrow 32 and 33 -- these are actually  
21 duplicates, Ms. Cronk filed these as well -- 35, 36;  
22 Ministry of Environment No. 10, and Ministry of  
23 Environment No. 13.

24 ---EXHIBIT NO. 1154: Interrogatories referring to  
25 Panel 4 evidence

---EXHIBIT NO. 1155: Interrogatories referring to  
Panel 8 evidence

MS. SWENARCHUK: I don't know if this microphone is going to work.

CROSS-EXAMINATION BY MS. SWENARCHUK:

Q. My first question is for Mr. Nicks, and it's a clarification question pertaining to two figures in the Panel 8 statement of evidence.

First of all, you will recall that reference has been made to Figure 5, which is at page 72 - and I'm looking now particularly at the regeneration on Crown lands graph, Mr. Nicks - and then Table 3, which is at page 124, which is a summary of fifth-year stocking assessment rules to the end of 1988.

Now, with regard to Figure 5 on page 72 and in regard to the regeneration on Crown lands, I believe the summary that was provided several times in the evidence are these figures: In 1981, the total area of regeneration was 95,000 hectares; in 1988 a 125 hectares representing a 32 per cent increase.

Now, do you have a figure for the proportion of that that was natural regeneration?

MR. NICKS: A. The proportion of which figure, Ms. Swenarchuk?

1 Q. Of each figure, the 95,000 hectare  
2 figure at the beginning of the '80s and the 1988 figure  
3 of 125,000 hectares.

4 A. Those are found in Figure 5?

5 Q. Right.

6 A. No, I don't believe I do have a  
7 figure for that.

8 Q. Turning then to Table 3, I believe  
9 Mr. Waddell clarified earlier in the day that when we  
10 looked at - this is at page 124 - when we look at the  
11 total at the bottom of the page for all working groups  
12 of 73,729 hectares, I think Mr. Waddell clarified that  
13 18,246 hectares of that was planted and that the  
14 remainder was -- I want to clarify this -- I believe  
15 you said either seeded or natural regeneration. Is  
16 that correct, Mr. Waddell?

17 MR. WADDELL: A. I believe that's  
18 correct.

19 Q. Now, do you have an indication of  
20 what proportion of that was natural regeneration, if  
21 not actual hectares, an approximate percentage?

22 A. Are you directing the question to me?

23 Q. To either one of you.

24 A. Well, we do have the -- I'm going to  
25 let Mr. Nicks answer that because he has compiled the



1 data, Ms. Swenarchuk.

2 MR. NICKS: A. I'm not sure I'm clear on  
3 exactly what your question is. Could you please repeat  
4 it?

5 Q. I think I just saw the answer to my  
6 question.

7 Let's look at the total -- about half-way  
8 down the column for the number of hectares for all  
9 working groups regenerated by natural means and we see  
10 46,453.

11 All right. To clarify that further then,  
12 can you indicate to me what exactly you mean by natural  
13 regeneration? Are these areas which received some  
14 treatment from Industry and then were left to natural  
15 regeneration or no treatment at all or both?

16 A. By "some treatment", are you  
17 referring to some physical activity to enhance natural  
18 regeneration?

19 Q. I'll let you do it your way. Tell me  
20 what you mean specifically in this chart by "natural  
21 regeneration"?

22 A. Well, the natural regeneration  
23 techniques are those that were reported to me by the  
24 responding companies and they include such things as  
25 stripcutting for black spruce and clearcutting to leave

1 advance growth, natural regeneration to aspen through  
2 simply clearcutting, all forms of -- normal forms of  
3 natural regeneration treatment....

4 Q. Would that include as well site  
5 preparation only and then natural regeneration or would  
6 that be considered to be artificial regeneration?

7 A. No. According to our definition we  
8 concur, I believe, with the definition of the MNR,  
9 which was that artificial regeneration involves the  
10 placement of reproductive material from outside the  
11 site onto the site such as planting stock and seed. So  
12 it's legitimate to consider site preparation for  
13 natural as a natural regeneration method. Those are  
14 included.

15 Q. Now, do you have any breakdown of the  
16 amount of those forty-six and a half thousand hectares  
17 that used each of these natural regeneration  
18 techniques?

19 A. I don't have that information with  
20 me. It was used to compile the figures.

21 Q. You do have the information available  
22 though, not with you but --

23 A. It's not with me.

24 Q. Can you tell me what kind of  
25 breakdown is in those figures? Is it by the various

1 techniques I've asked you about?

2 A. It's more specific. It mentions  
3 specific treatment by proposed working group.

4 MS. SWENARCHUK: I'm going to try to use  
5 the mike now.

6 I'm asking Ms. Cronk to have that  
7 material produced.

8 MS. CRONK: I understand from Mr. Nicks  
9 it is available, and if it is we'll produce it.

10 MS. SWENARCHUK: The technical  
11 arrangements, Madam Chair....

12 Q. Would you have any estimate in mind,  
13 Mr. Nicks, with regard to the proportion of that  
14 natural regeneration which was by stripcut or blockcut  
15 methods?

16 MR. NICKS: A. I don't recall the exact  
17 figure right now. I would have to check and get back  
18 to you.

19 Q. Approximately, you don't have that  
20 either?

21 A. Approximately, I don't have --

22 Q. Approximate --

23 A. I don't wish to misinform the Board.

24 Q. Fine. We'll wait.

25 Now, just to clarify, does that figure

1 then also include forest lands on which harvest  
2 occurred and no subsequent treatment of any kind  
3 occurred?

4 A. No, it only includes those lands on  
5 which there was a prescription applied.

6 Q. And I take it there are lands that  
7 have been harvested within this time period which were  
8 harvested in which they received no prescription?

9 A. That's true. Those were areas that  
10 were agreed to jointly by the MNR and Industry as being  
11 nontreatable.

12 Q. I was going to come to this later,  
13 but we can talk about this now. Is there a consistent  
14 definition in all the FMAs of what constitutes  
15 untreatable land or does it vary by FMA?

16 A. I'm not aware of the definitions of  
17 other FMA holders for nontreatable status.

18 Q. But you are aware of the  
19 definition....

20 A. Yes.

21 Q. What definition is that  
22 approximately?

23 A. Approximately those areas which are  
24 difficult to treat because of shallow soils and terrain  
25 and residual timber.



1 Q. And do you have an idea for your own  
2 FMA how the size of that area compares to the areas  
3 harvested which did receive treatment?

4 A. I have a rough idea.

5 Q. And what would that comparison be?

6 A. Well, perhaps I can explain it this  
7 way: Current proportion of area which receives an  
8 intensive treatment, it's in the order of - that is  
9 site preparation - followed by planting, reseeding, in  
10 the order of 70 percent.

11 Q. Seventy per cent of the annual  
12 harvest?

13 A. Approximately, yes. It varies from  
14 year to year. Then there is a further proportion which  
15 is left to natural regeneration and at the moment -  
16 again it varies from FMA to FMA and year to year - but  
17 perhaps 15 per cent.

18 Q. Fifteen per cent of the natural  
19 regeneration treatment or no treatment? Which did you  
20 mean?

21 A. About the same, difference is split.

22 Q. The 70 per cent intensive treatment,  
23 was that a figure from your own FMA or are you  
24 estimating that for all FMAs?

25 A. It's from our own FMA experience.

1 MADAM CHAIR: Excuse me, Ms. Swenarchuk.

2 Does the 70 per cent include the  
3 treatment of the NSR lands?

4 MR. NICKS: Those lands have all been  
5 treated, Madam Chair.

6 MS. SWENARCHUK: Let me clarify my  
7 question.

8 Q. I'm asking for percentages related to  
9 harvest, and I understood you to indicate that on your  
10 own FMA, 70 percent of the harvested land receives an  
11 intensive treatment. Is that what you said?

12 MR. NICKS: A. That is my understanding,  
13 yes.

14 Q. And approximately 30 per cent then  
15 receives some treatment for natural regeneration,  
16 approximately 15 per cent receives some treatment for  
17 natural regeneration, and another 15 per cent does not  
18 receive treatment. Does that summarize it?

19 A. That has been the past practice, but  
20 recently we've come up with a different system in  
21 the -- speaking from April 1st onward, we've come to an  
22 agreement with the MNR that we -- because we have  
23 observed regeneration, natural regeneration,  
24 consistently on many areas, most areas, in which we, in  
25 the past, have declared nontreatable, we have reached

1 an agreement where we have two categories now,  
2 intensive and extensive, and we'll be starting this  
3 year.

4 That is why I haven't mentioned the  
5 future. But under that system we've reached an  
6 agreement where areas which are not capable of being  
7 artificially regenerated or for which there is no  
8 requirement from a wood supply standpoint, the 70 per  
9 cent in our case corresponds to the per cent of the  
10 area we feel we should site prepare -- need to site  
11 prepare and treat intensively to maintain our allowable  
12 cut, will fall into the extensive category and that  
13 those areas will be left or assessed at the fifth year,  
14 and those areas which meet the stocking standards will  
15 be declared naturally regenerated.

16 Those areas which don't will be, again,  
17 left for a further five years, and if successful  
18 stocking has been achieved after the 10-year period,  
19 then they will be considered naturally regenerated and  
20 if the area that still has not been standard after 10  
21 years, it is in effect nontreatable and it's agreed no  
22 further efforts are required.

23 Q. Now, how do you expect this - if you  
24 have an indication - how do you expect this to change  
25 the proportion that we talked about earlier about, your

1 70, 15 and 15 -- how do you think those proportions of  
2 land will change?

3 A. I expect the proportion of natural  
4 will increase. It's been the observation of our  
5 foresters that, as I said, areas of untreatable  
6 characteristics -- shallow sites, sites with dense  
7 residual hardwood -- do indeed come back to something.  
8 Often softwood, shallow sites, the uplands sites, tend  
9 to have an understory of black spruce in the way of  
10 advance growth; that does provide adequate stocking,  
11 even with natural regeneration.

12 So I would optimistically expect the area  
13 that does not regenerate either naturally or  
14 artificially after a 10-year period might be in the  
15 order of five per cent. That is my best estimate at  
16 the moment. This is an involving process.

17 Q. So you would be looking at 25 percent  
18 natural regeneration and about five per cent  
19 nontreatable?

20 A. That would be my best estimate at the  
21 moment.

22 Q. Now, is that based on one FMA or the  
23 four?

24 A. There are three.

25 Q. Are your figures based on the three



1 or just the one?

2 A. They are based on the upper and lower  
3 Spanish forest, which are the two FMAs, most of my  
4 involvement is with. But I would suggest that the same  
5 relationship should hold for the pine land FMA,  
6 immediately adjacent to the upper Spanish and similar  
7 in many respects.

8 Q. Now, Mr. Squires, I would like you to  
9 give me the same information with regard to the FMA  
10 that you are concerned with and the proportion of  
11 regeneration on that FMA which is intensive in  
12 artificial regeneration techniques.

13 MR. SQUIRES: A. intensive and  
14 artificial being synonymous?

15 Q. Is reason I want to be careful in the  
16 wording here is as we've heard for two years people use  
17 these terms quite differently. I don't want to put  
18 words in your mouth.

19 Just looking at the chart on page 124  
20 which stocks about natural and artificial approaches.  
21 For your FMA then, what proportion of the area is being  
22 regenerated with artificial maintenance?

23 A. I would have to give approximate  
24 estimates for the Board.

25 Q. Yes.

1                   A. Because it varies from year to year  
2 essentially over a five-year period as well as  
3 comparing one five-year period to another.

4                   We have done studies checking on the  
5 ability to treat the ground with artificial. It has  
6 varied up and down between say 35 per cent to 45 per  
7 cent on the Spruce River Forest. That is ground that  
8 we can effective mechanically site prepare. The areas  
9 above that are regenerated naturally in one form or  
10 another.

11                  Q. So 65 per cent then is one form or  
12 another of natural regeneration, approximately?

13                  A. 65 per cent give or take five per  
14 cent.

15                  Q. And what are you including in your  
16 use of natural regeneration? Are you including site  
17 preparation for natural regeneration or not?

18                  A. I would include it as natural --  
19 natural.

20                  Q. And any approximation of what  
21 percentage that entails?

22                  A. I can tell you it would be low  
23 because we have tended to augment natural --  
24 scarification for natural inter-seeding.

25                  Q. And what proportion of that natural

1 regeneration results from block or stripcutting?

2 A. I'm afraid to hazard a guess on what  
3 proportion it would be.

4 Q. Is there any being done?

5 A. Yes, there is some. The total area  
6 would be somewhere in the vicinity of 500 hectares over  
7 a five-year period.

8 Q. Could you give some indication of  
9 what percentage?

10 A. It's probably in the vicinity of  
11 between one to two per cent.

12 Q. So would I be correct in assuming  
13 then that between one and two per cent of the harvested  
14 lands over that time period have been harvested using a  
15 block or stripcut approach; is that right?

16 A. That is correct.

17 Q. And the remainder is conventional  
18 cutting largely?

19 A. That's correct.

20 Q. And, Mr. Ferguson, with regard to  
21 your FMA lands, could you indicate what proportion of  
22 those lands are being -- of the harvested areas of  
23 those lands are being regenerated using artificial  
24 means, first of all?

25 MR. FERGUSON: A. Again, I would have to

1 suggest, as my colleagues have done, an approximation.  
2 It varies year to year, et cetera. I would estimate  
3 that artificial regeneration on the issue of forest  
4 growth for which I am directly responsible would amount  
5 to 65 to 70 per cent of our renewal treatments.

6 Q. Now, could you further define what  
7 you mean by "artificial"? Do you mean site preparation  
8 and planting or planting as one category, site  
9 preparation as another. Which do you mean?

10 A. What I consider to be regeneration  
11 treatments, artificial regeneration treatments, would  
12 be planting and seeding.

13 Q. So then you would class site  
14 preparation to enhance natural regeneration as a  
15 natural regeneration technique, would you?

16 A. That's correct. Referred to as  
17 scarification normally.

18 Q. So if 65 per cent is planting or  
19 seeding, as I understand you then approximately 35 per  
20 cent would be natural regeneration techniques?

21 A. That's correct.

22 Q. And of that approximately what  
23 proportion involves some treatment and what are the  
24 treatments?

25 A. Some of the natural regeneration



1 treatments which we have applied -- I assume you are  
2 talking natural regeneration?

3 Q. Yes.

4 A. In the poplar working groups the  
5 natural regeneration treatment would strictly be to  
6 clearcut for natural regeneration, promote suckering.  
7 No further treatment involved there.

8 We have made use in the spruce working  
9 group on lowland sites, primarily use of stripcuts,  
10 seed tree plots; we have done some scarification in the  
11 spruce work group to improve seedbed as well. That was  
12 done in the early years of the FMA, it's becoming less  
13 common now. I guess the reason for that being that as  
14 we move more towards full-tree logging systems, we need  
15 to improve the seedbed in the lowland spruce types of  
16 as no longer not so much a requirement.

17 Q. And why is that?

18 A. The presence of logging slash, in our  
19 experience in the lowland spruce types, tends to  
20 inhibit spruce regeneration. When we were heavily into  
21 running at the stump, we found it necessary to remove  
22 this, or at least align the slash that was left and  
23 improve the seedbed, not only progress more the  
24 full-tree systems -- necessary.

25 Q. So can you give us an approximation

1 of the amount of the harvested area on which strip and  
2 blockcutting is being used?

3 A. Strip and blockcutting --  
4 stripcutting is such, I would say -- is a very minimal  
5 proportion. We have found that much more effective, in  
6 our part of the world anyway, our seed tree plots which  
7 tend to achieve the same result.

8 The nature of the spruce working group on  
9 English River Forest is -- it's usually a very small,  
10 irregular-shaped type of stands and very difficult in  
11 some cases to incorporate strips, but by using the  
12 natural boundaries of adjacent stands and seed tree  
13 plots as well, we find this is a successful method of  
14 regenerating spruce.

15 Q. So I take it then there's not much  
16 regeneration through stripcuts. What percentage then  
17 approximately would be occurring using seed blocks --  
18 seed trees?

19 A. I would -- there are usually more  
20 than just a single tree.

21 Q. That is why I said block.

22 A. Plot we call them.

23 Q. Plot.

24 A. Again, this technique is used  
25 strictly in the lowland sites of which there are not a

1 great deal. I would say in total that the use of the  
2 seed tree plots, there's a -- renewal technique would  
3 be less than five per cent of the English River Forest.

4 Q. And I'm not sure if we dealt with  
5 this one yet. The proportion of the harvested area on  
6 which the company uses scarification, as you call it,  
7 to foster natural regeneration.

8 A. As I've indicated, this was a  
9 technique which was used primarily in the earlier years  
10 during the early 1980s. In fact, I would say over the  
11 last three to four years I don't believe we've done any  
12 of this treatment.

13 Q. Just summarizing in my own mind.  
14 About 65 per cent artificial regeneration using  
15 planting or seeding; correct?

16 A. That's correct.

17 Q. And this is for how many FMAs now?

18 A. I'm talking specifically to the  
19 English River Forest. That is the only one I can speak  
20 with any authority on, I'm afraid.

21 Q. Mr. Gemmell, on your land base, the  
22 same questions. What is the -- this is Spruce River?

23 MR. GEMMELL: A. Iroquois Falls Forest,  
24 Iroquois Falls River.

25 Q. What is the approximate proportion of

1 the harvested land being treated by artificial means  
2 and what do you include as artificial?

3 A. I would estimate it's between 60 and  
4 70 per cent and it includes planting and seeding.

5 Q. Not site preparation for natural  
6 regeneration?

7 A. No.

8 Q. All right. So then of the natural  
9 regenerating areas then, what proportion received a  
10 treatment?

11 A. As I indicated in the presentation,  
12 there was a certain amount of it done pre-1985,  
13 alternate blockcuts and seed tree since about 1985.  
14 Our regeneration on the road sites has been in the  
15 direction of careful logging leaving advance growth as  
16 the source of renewal.

17 Q. And any site preparation for natural  
18 regeneration?

19 A. No, we wouldn't want to because we  
20 are trying to maintain the advance growth.

21 Q. I didn't ask Mr. Ferguson. Is there  
22 a proportion of the lands on this FMA that receive no  
23 treatment whatever after harvest?

24 MR. FERGUSON: A. Are you directing the  
25 question to me?

1 Q. Yes.

2 A. The only proportion of the land which  
3 we feel is not receiving a treatment is that proportion  
4 which is more or less removed over the long-term in the  
5 construction of roads and things of this nature which  
6 might amount to in the neighbourhood of five per cent.

7 Q. So all harvested lands aside from  
8 that receives treatment?

9 A. That's correct.

10 Q. And Mr. Gemmell --

11 MR. GEMMELL: A. All harvested land  
12 receives a silvicultural prescription and treatment,  
13 yes.

14 Q. Are there lands on which the harvest  
15 is the only treatment?

16 A. Now, again, we are talking -- and I  
17 refer to it as careful logging, that is a harvest  
18 treatment to maintain the advance growth -- so, yes.

19 Q. Careful logging for advanced growth  
20 is a technique for which funding is available under the  
21 FMA; is that not correct, Mr. Gemmell?

22 A. Not in our FMA, no.

23 Q. To your knowledge, is it available on  
24 any FMA lands?

25 A. I'm not -- it could be. I'm not



1 familiar with the other FMA ground rules.

2 Q. What about the other FMAs with which  
3 the gentlemen are familiar? No funding in your --  
4 Mr. Nicks?

5 MR. NICKS: A. No.

6 Q. What about funding under these FMAs  
7 for strip or blockcuts?

8 A. No.

9 Q. No, Mr. Nicks.

10 MR. SQUIRES: A. No.

11 Q. No, Mr. Squires.

12 MR. FERGUSON: A. No.

13 MR. GEMMELL: A. No.

14 Q. No, Mr. Ferguson or Mr. Gemmell.

15 Now, Mr. Nicks, as you can see from my  
16 little survey here, different companies do seem to work  
17 with different definitions of what constitutes natural  
18 regeneration techniques.

19 In the data that you will be providing me  
20 with regard to how Table 3 was analyzed, is the  
21 company's definition of what constitutes natural  
22 regeneration part of the data?

23 MR. NICKS: A. No, it's not, however,  
24 there is a description of the system.

25 Q. I want to turn, just for a moment,

1 Mr. Squires, to your evidence regarding  
2 standards and the different plots that are referred to  
3 in the appendix to your containment in the Panel 8  
4 evidence.

5 Specifically I just want to refer to --  
6 for a moment to plots one and two.

7 MR. SQUIRES: A. Okay.

8 Q. Now, these are not field plots, is  
9 that correct, in the sense of they are not plots that  
10 were laid out on harvested forest lands?

11 A. These plots were laid out in the  
12 plantations that were established in I believe the near  
13 year 1981 in the nursery, in the agricultural field.

14 Q. So you would agree then, for example,  
15 they would not be subject to a type of competition  
16 problem that an operational plot on forested land  
17 harvested would be subject to?

18 A. I'm not sure I can agree. I really  
19 don't know as to what the competition was. I would  
20 expect there would be -- where the Ministry of Natural  
21 Resources....

22 Q. But you indicated you can't respond  
23 but I assumed if it was planted in an agricultural  
24 field the diversity of species that one encounters on  
25 the very site, types within forest land, the problem is

1 not present?

2 A. Again, I'm not prepared to speculate  
3 on that. I know there is quite a diversity present  
4 today relative to many cases.

5 Q. Now, do you have Exhibit 1138? That  
6 was a compilation of interrogatory responses filed by  
7 Ms. Cronk.

8 A. 1138.

9 MS. CRONK: Just to assist, Madam Chair,  
10 if you just tell the witness what interrogatory number.  
11 They probably don't have it in the form, but they have  
12 all the interrogatories.

13 MS. SWENARCHUK: Forest for Tomorrow  
14 Interrogatory No. 17.

15 Q. In the interrogatory pertaining to  
16 the treatments applied to plot three, which was one of  
17 the plots you referred to in your stocking discussion  
18 and it's also as you indicate in your response -- I  
19 take it you wrote this response?

20 MR. SQUIRES: A. Yes, I did.

21 Q. In Block 10 of 34-C?

22 A. I'm sorry, within what block?

23 Q. Block 10.

24 A. All right.

25 Q. And I simply wanted to review with

1 you that with regard to treatments and stocking  
2 standards on this plot, it's your view expressed in  
3 paragraph B of this response that it would not be  
4 practical to use the same intensive treatment on those  
5 field plantations?

6 A. Not practical in the sense it's not  
7 necessary.

8 Q. You also said it would not be  
9 practical or necessary. What did you mean by  
10 "practical" then?

11 A. Not practical in the sense that it  
12 was extremely expensive and it would not be necessary,  
13 that would be the case, implies not practical.

14 Q. Practical also refers to the cost?

15 A. (nods)

16 Q. And one general question for you,  
17 Mr. Waddell, with regard to the position of the  
18 Industry on its renewal capacities as expressed  
19 throughout the Panel 8 witness statement.

20 I take it you are arguing for the  
21 capacity of the Industry to regenerate forested lands  
22 and you have in mind that the harvest technique on most  
23 of those lands will be conventional large area  
24 clearcutting; is that correct?

25 MR. WADDELL: A. Not necessarily.

1 Q. Could you expound then?

2 A. Well, can I ask you to rephrase your  
3 question, please? I'm not certain that I understand  
4 it.

5 Q. There is, I think, no discussion in  
6 the Panel 8 witness statement of modified cutting,  
7 meaning strip or blockcutting. There is frequent  
8 reference to harvest, but seeing no references  
9 specifically to strip or blockcutting I'm assuming that  
10 your meaning of the word "harvest" throughout the Panel  
11 is largely conventionally large area clearcutting?

12 MS. CRONK: Madam Chair, I don't object  
13 to the question but I do object to that  
14 characterization of what the evidence is. Part of the  
15 Panel 8 evidence includes the case studies. I have no  
16 objection to Ms. Swenarchuk putting that question, but  
17 there is discussion that...

18 MS. SWENARCHUK: I think I confined my  
19 question to the Panel 8 witness statement, Ms. Cronk.  
20 I quite agree. There is one example in the Panel for  
21 case studies.

22 Q. Let me just ask you then what you  
23 have in mind, Mr. Waddell, when you are using the term  
24 "harvest" in the Panel 8 witness statement?

25 MR. WADDELL: A. Well, inasmuch as the



1 clearcutting -- clearcutting is the preferred  
2 silvicultural system across the boreal forest for  
3 the -- in the great majority of cases. Yes, I would  
4 agree that the silvicultural system that we have in  
5 mind is that of clearcut.

6 MS. SWENARCHUK: Do you want to take a  
7 break now or should I proceed with the next subject  
8 area?

9 MADAM CHAIR: Yes, we'll take a short  
10 break now, 10 minutes, and come back and then go until  
11 12:00.

12 ---Recess at 10:53 a.m.

13 ---On resuming at 11:08 a.m.:

14 MADAM CHAIR: Please be seated.

15 MS. SWENARCHUK: Q. Mr. Ferguson, I'd  
16 like to ask you some questions arising out of a Panel 4  
17 case study from your company.

18 First of all, you have included in the  
19 appendix to that study ground rules for the FMA?

20 MR. FERGUSON: A. That's correct.

21 Q. And if you would refer to Exhibit  
22 1154, or if it's more convenient to you, the Panel 4  
23 interrogatories - yes - Question 2 from Forests for  
24 Tomorrow. These I filed this morning.

25 A. Yes, I have it here. —

1 Q. We asked for the differences between  
2 the ground rules in Appendix 1 and the silvicultural  
3 prescriptions under the pre-FMA management plan. Did  
4 did you write any response to this, Mr. Ferguson?

5 A. I don't believe I wrote the actual  
6 response, however, it was discussed with me.

7 Q. So I'm assuming you agree with the  
8 answer provided then?

9 A. If I might just have a moment to  
10 refresh my memory. It's been some time.

11 Q. Certainly.

12 A. Yes, I would agree with that. I  
13 would agree with the response.

14 Q. So in brief, I will just clarify the  
15 record by reading it in. The response was that:

16 "The pre-FMA management plan written by  
17 the company did not include silvicultural  
18 prescriptions, however the grounds rules  
19 as agreed to at the beginning of the FMA  
20 were, for the most part, reflected with  
21 forest management practices on the  
22 English River Forest prior to the signing  
23 of the agreement. The one major change  
24 was the provision of a planting option in  
25 the FMA ground rules."

1 It goes on to say:

2 "From 1974 to the 1980 signing of the  
3 English River FMA, there was no planting  
4 on the English River management unit."

5 Now, is it correct that the ground rules  
6 for each FMA were negotiated with each company as the  
7 FMA was signed?

8 A. That is my understanding certainly in  
9 the case of the English River.

10 Q. And that complies with the  
11 understanding of other people involved?

12 A. (nods)

13 Q. Yes.

14 Now, I would like to ask Mr. Waddell and  
15 Mr. Squires and Mr. Gemmell if the difference between  
16 the pre-FMA management plan and the FMA ground rules  
17 which apply to this FMA, namely, the addition of a  
18 planting option, is similar to the change that occurred  
19 with other FMAs or were there additional changes?

20 Mr. Squires?

21 MR. SQUIRES: A. To the best of my  
22 recollection on the Spruce River Forest at the  
23 negotiating time back in 1980-'81, the prescription for  
24 planting was current and the Ministry renewal on the  
25 Spruce River Forest. I cannot think of any new

1 prescriptions that were put into the ground rules that  
2 had not already taken place on the Spruce River Forest.

3 Q. So then those ground rules also were  
4 reflective of forest management practices on the Spruce  
5 River Forest before the FMA?

6 A. As to type of treatment, yes, maybe a  
7 difference in intensity.

8 Q. And, Mr. Waddell, with regard to the  
9 E.B. Eddy FMAs?

10 MR. WADDELL: A. Well, let me be  
11 perfectly clear on what you are asking me, Ms.  
12 Swenarchuk, because we did not carry out any  
13 regeneration responsibilities, of course, prior to the  
14 signing of our FMA in 1980.

15 Are you asking me on the upper and lower  
16 Spanish Forest if the ground rules that we negotiated  
17 with the MNR in 1980 were --

18 Q. I'll rephrase the question.

19 A. Thank you.

20 Q. With regard to the ground rules  
21 negotiated with the Ministry when the FMAs came into  
22 effect, are those ground rules largely reflective of  
23 forest management practices that occurred on those  
24 lands before the FMAs were negotiated?

25 A. By and large I would agree that they

1 were with the exception of the wind rowing of poplar  
2 that we illustrated in our case study. This was not  
3 the practice carried out by MNR prior to our  
4 introducing it in 1981.

5 Q. And what about the planting option  
6 provided in your ground rules? Have there been  
7 planting on those lands before the FMAs in the decade  
8 before, for example?

9 A. When you say "those lands" you mean  
10 our FMA lands?

11 Q. Yes.

12 A. Yes, very definitely, the Ministry  
13 had a vigorous planting program prior to 1980 on our  
14 FMA lands.

15 Q. Mr. Gemmell? And my question is:  
16 Were the ground rules negotiated in your FMA largely  
17 reflective of forest management practices that occurred  
18 on those lands before the FMAs were developed?

19 MR. GEMMELL: A. Yes, I would say they  
20 are largely reflective of it. There wasn't the same  
21 intensity being carried on, specifically planting  
22 program. There wasn't as much planting going on. So  
23 to a degree, yes, they were reflective.

24 Q. And would it be accurate to say --  
25 I'll ask Mr. Waddell, you having led much of this



1 evidence -- that speaking now generally across the area  
2 of the undertaking, that a result of the FMA structure  
3 has been an increase in planting treatments across the  
4 area of the undertaking?

5 MR. WADDELL: A. I have no -- I can't  
6 put my head to any figures at the moment where I can  
7 answer that question.

8 Q. From your experience, that has not  
9 been your impression?

10 A. I would think so.

11 Q. Now, Mr. Ferguson, with regard to the  
12 case study from your area, would you please turn to  
13 page 33 of that study, which is the Panel 4 witness  
14 statement.

15 MR. FERGUSON: A. Yes, I have it.

16 Q. Now, on these pages, pages 32 and  
17 33, were you the writer of these pages, Mr. Ferguson?

18 A. Yes, I was.

19 Q. You were discussing, then,  
20 alternatives for renewal options on this land, and at  
21 the top of page 33 you are discussing the option of  
22 site preparation for natural seeding, and you indicate  
23 in the previous page that it was worthy of serious  
24 consideration.

25 However, you indicate in the last line of

1 that paragraph that the forester was not convinced that  
2 natural seeding would be generated to site to its full  
3 potential and therefore that option was not utilized?

4 A. Yes, that's correct.

5 Q. Could you indicate for us if your  
6 company were paying the full cost of the regeneration  
7 treatment, would your decision have been different?

8 A. No, it would have been the same  
9 decision.

10 Q. And would you generalize that  
11 further? Are you suggesting that your use of planting  
12 would be as widespread if the company were paying the  
13 full cost as it is with the regeneration under the FMA?

14 A. I think you lost me there. We jumped  
15 from a seeding treatment to planting and I'm not sure I  
16 got quite the connection.

17 Q. Perhaps I'll rephrase the question.  
18 The forester in this case decided not use natural  
19 seeding as the option?

20 A. Right.

21 Q. And can you remind us what option was  
22 utilized?

23 A. The option that was utilized was site  
24 preparation with simultaneous seeding of jack pine.

25 Q. As opposed to natural seeding only?

1                   A. Correct, yes. The ground rules would  
2 state that site preparation, whether it be a site  
3 preparation followed by seeding or planting or strictly  
4 a site preparation with no follow-up treatment or in  
5 effect a scarification, those were the three options.

6                   In my evaluation of the site based on  
7 observations of other very similar sites in the general  
8 area which had been treated strictly by scarification  
9 for natural, the regeneration was not up to what I  
10 considered to be the optimum level of the site, and for  
11 that reason the choice was made to augment the natural  
12 seeding, recognizing that some would be present, but  
13 the application of seeds directly onto the site would  
14 be expected to bring the site closer to its full  
15 potential.

16                  Q. And when you say closer to the full  
17 potential, do you have in mind an approximate  
18 difference in stocking resulting from the seeding  
19 treatment?

20                  A. Thinking back to the time when this  
21 was done, and we are looking back eight years, I  
22 believe the figures that were tossed around in my mind  
23 were that we could probably, over time, achieve the  
24 minimum stocking level of 40 per cent with no further  
25 seeding being applied.

1                   However, I felt that by seeding of the  
2                   site as well that we could achieve stocking levels in  
3                   the neighbourhood of 60 to 70 per cent given that the  
4                   site preparation cost was to be incurred. In either  
5                   case my decision was to seed as well considering that  
6                   the price of seed is relatively small compared to the  
7                   total minimal cost of the site.

8                   Q. And the cost of the seed was a cost  
9                   borne by the Ministry; is that not correct?

10                  A. Yes, that's correct.

11                  Q. So are you saying that even if you  
12                  had left it for natural regeneration you would have  
13                  performed the site preparation on it?

14                  A. That's correct, and according to the  
15                  ground rules there was no option but to conduct some  
16                  form of site preparation.

17                  Q. Now, would you look at Exhibit 1154,  
18                  which are the Panel 4 interrogatories we filed this  
19                  morning, and the first page of that exhibit, which is  
20                  Question 1A, in which we asked for each of the case  
21                  study areas: What is the cost per hectare of the  
22                  silvicultural treatments used.

23                  And with regard to Case Study 4A, we see  
24                  that the overall cost per hectare of the silvicultural  
25                  treatments used in Case Study 4A was \$108.38 per

1 hectare in terms of MNR funding provided to Canadian  
2 Pacific Forest Products Limited under the terms of the  
3 FMA. This figure is in 1982 dollars and excludes the  
4 cost of seed which was provided at no cost by the MNR  
5 as per the terms of the FMA.

6 So if I understand your response, you  
7 were obligated under the ground rules to use site  
8 preparation; correct?

9 A. That's correct.

10 Q. And the seed was to be provided by  
11 the MNR so there was no additional cost to the company  
12 that included seeding with the site preparation?

13 A. The additional cost to the company  
14 was minimal. There would be some associated costs to  
15 the company in that the seeding with the -- or  
16 simultaneous seeding does involve some time spent  
17 handling seed.

18 It is necessary to limit the travel speed  
19 of the Bracke scarifier when seeding to in fact get the  
20 seed placed properly. So there were some additional  
21 costs to the company, but not of a major nature, no.

22 Q. Now looking at Paragraph C on that  
23 page, you discussed the option of site preparation  
24 followed by jack pine planting?

25 A. I'm sorry, we are back to --



1 Q. Page 33 of the witness statement,  
2 Case Study A, third paragraph, C?

3 A. Yes.

4 Q. And the decision was not to use  
5 planting?

6 A. That's correct.

7 Q. On the ninth line of that paragraph,  
8 it says that another consideration was in 1982, limited  
9 quantities of planting stock were available.

10 Now, in your experience, are there lands  
11 within the area of the undertaking which would have  
12 been planted at various times in the '80s if more  
13 planting stock had been available?

14 MS. CRONK: On his area?

15 MS. SWENARCHUK: In his experience. I'll  
16 let him define how he wants to answer that.

17 MR. FERGUSON: I would have to confine my  
18 comments to the area with which I am familiar, and I  
19 would have to say no, that we prescribe the treatments,  
20 whether they be planting or seeding, based on the site  
21 characteristics and that with the exception possibly of  
22 the first year of the FMA, we certainly have planted  
23 areas which we wanted to plant and seeded areas which  
24 we wanted to seed.

25 The first year or so of the FMA, your

1 point may be valid in that -- as pointed out in one of  
2 the interrogatories, there was no planting as such done  
3 on the English River Forest for a period of time prior  
4 to the FMA.

5 It was our feeling that this did  
6 contribute to some extent to the NSR which was present  
7 on the English River Forest when the FMA was signed,  
8 and, in fact, the planting we did in the initial years  
9 of the FMA was directed towards the NSR. However, it  
10 required a couple of years to phase in the English River  
11 Forest into the overall nursery stock production in the  
12 northwest region.

13 So I would say that in the first year or  
14 two of the FMA program in the English River Forest  
15 there may have been a shortage of stock. We would have  
16 liked to have dealt with some of the NSR areas more  
17 quickly than what we did.

18 MS. SWENARCHUK: Q. Mr. Gemmell, on the  
19 areas which you are familiar, has that ever been the  
20 case, that there have been lands which the company  
21 would have planted had more stock been available?

22 MR. GEMMELL: A. I think over the years  
23 of the -- since the inception of the FMA, we identified  
24 the NSR lands which were planted as per the  
25 prescriptions. I think we are fairly close to balance

1 as to what we want to plant were planted. There is  
2 very close within, say, half a million trees at least.

3 Q. Half a million trees would translate  
4 to - if this can be done - what type of area?

5 A. Two thousand trees to the hectare.

6 Q. So we are talking about several  
7 thousand hectares where there may not have been the  
8 stock you wanted?

9 A. These are just -- and the only  
10 concern is what is left the NSR areas or backlog areas,  
11 but very close to what we wanted is what we are doing.

12 Q. And was that the case right through  
13 the '80s?

14 A. Well, there was the inception of the  
15 FMA and then there was the implementation period, so  
16 eventually the NSR areas were identified and the areas  
17 have been treated over those years.

18 Q. So you haven't had any problem with  
19 stock availability?

20 A. No, we haven't.

21 Q. Can I ask you, Mr. Squires, on your  
22 lands have there been areas that would have been  
23 planted if more stock were available than there was?

24 MR. SQUIRES: A. I would have to say  
25 that between 1985 and today there is area that would

1 have been planted that had not been planted because  
2 stock had not been available.

3 Q. Thank you. And Mr. Waddell or  
4 Mr. Nicks?

5 MR. WADDELL: A. To the best of my  
6 knowledge on our FMAs we have not had any stock  
7 shortage since the inception of the FMAs.

8 MR. GEMMELL: A. Ms. Swenarchuk, I just  
9 want to make sure our maths agree. Yours is as bad as  
10 mine. I think it works out to a coupe hundred hectares  
11 a year that I was talking about, that is how close we  
12 were.

13 Q. Now, Mr. Ferguson, if we could look  
14 at pages 42 to 43 of your case study, and this has to  
15 do with a stocking assessment on the areas, and  
16 specifically on page 42 and the chart in the middle of  
17 the page we notice that 27 per cent of the jack pine  
18 found was off the patches from site preparation?

19 MR. FERGUSON: A. Yes, that's correct.

20 Q. And five per cent was on the patches?

21 A. That is also correct.

22 Q. And that you indicated on page 43,  
23 the following page in paragraph B, with regard to the  
24 jack pine off the patches - and I'm reading now the  
25 fourth line from the bottom of that paragraph - that

1 this level of natural regeneration is expected on sites  
2 of this type.

3 Now, my question then is: Was  
4 scarification really necessary here? Could you not  
5 have received this level of regeneration without the  
6 scarification?

7 A. Well, in effect, I suspect that most  
8 of this 27 per cent may well have been there and it is  
9 a good probability that it was not directly  
10 attributable to the scarification as such. However,  
11 the 27 per cent stocking does not meet the minimum  
12 requirements under the FMA.

13 This is very consistent with what I had  
14 expected. Over time it might increase somewhat, but  
15 still would be very, very close to the minimum, at  
16 best.

17 Q. This was the second year stocking  
18 assessment and I think witnesses have testified during  
19 this Panel that one can expect stocking on natural  
20 regeneration lands often to improve over time.

21 Are you saying that you don't think it  
22 would have improved to the minimum stocking level?

23 A. I'm saying that it may have improved  
24 to the minimum stocking level, but I doubt it would  
25 have gone much beyond that.



1 Q. Now, on page 47 of this case study on  
2 the second full paragraph you discuss your company's  
3 tree improvement programs for jack pine and black  
4 spruce at both its Thunder Bay and Dryer operations.  
5 And we asked for an interrogatory on this issue and  
6 it's Forests for Tomorrow Question No. 13 contained in  
7 Exhibit 1154?

8 A. Sorry, what was the number of that  
9 again?

10 Q. Forests for Tomorrow No. 13.  
11 We asked how many hectares the company  
12 has planted or seeded with genetically improved trees.  
13 Are you the author of this, Mr. Ferguson?

14 A. No, I'm not. I'm not directly  
15 involved in the tree improvement program.

16 Q. That's fine. Perhaps you would like  
17 to read over the responses.

18 A. Yes. Thank you. Yes, I've read it.

19 Q. And you've read his response?

20 A. To the best of my knowledge, this is  
21 correct, yes.

22 Q. Can you indicate what rotation the  
23 company expects to use with the genetically improved  
24 stock?

25 A. That would be purely speculative. I

1 don't believe that enough -- certainly, I'm not  
2 familiar with the data to the extent where I would be  
3 comfortable in predicting a rotation age.

4 We would hope to possibly reduce rotation  
5 age to some extent, however, there are other gains, as  
6 I understand it, to be gained from tree improvement  
7 over and above the rotation age. They may be in the  
8 form of tree form and particular growth characteristics  
9 of the tree.

10 It is my understanding, and I must stress  
11 that I am by no means anything close to an expert on  
12 tree improvement, but possibly we could expect to gain  
13 increases in the vicinity of possibly ten per cent  
14 growth and I would -- translating that into reduction  
15 of rotation age, being a rotation age now of jack pine  
16 and natural standards, is seven years. Possibly we  
17 could decrease that to the order of 65 to -- 60 to 65  
18 possibly and have the same size of trees, if that is of  
19 any assistance. I stress that I am by no means an  
20 expert in this field.

21 Q. Now, with regard to the practice of  
22 clearcutting, Mr. Ferguson, would you agree that the  
23 size of the clearcut does have an impact on the amount  
24 of natural seed that can be expected to reach a site  
25 particularly with full-tree logging?

1                   A. To be clear in my mind, could you  
2 repeat that, please?

3                   Q. Would you agree that the size of  
4 clearcut can have an impact on the amount of natural  
5 seed that can be expected to reach a site particularly  
6 with full-tree logging when the slash is removed from  
7 the site?

8                   A. That would depend in large part to  
9 the species in which you are discussing. Full-tree  
10 logging in the case of jack pine would probably remove  
11 most of the tops and branches and in that sense would  
12 remove most of the seed from the site as well.

13                  In the case of spruce, for instance,  
14 again, we see that as present directly in the slash  
15 would be removed, however, seed from standing seed  
16 sources, in my experience, can travel great distances  
17 and I'm not sure it would have a major effect there as  
18 well.

19                  Q. Even with the spruce, though, I think  
20 you are indicating that the actual amount of seed that  
21 would be available on the site would be decreased?

22                  A. In that the seed and the slash would  
23 be removed, yes. However, in my experience, that does  
24 not contribute significantly to the regeneration of the  
25 forest.

1 Q. That does not contribute  
2 significantly, is that what you --

3 A. That's correct.

4 Q. Are you using planting extensively on  
5 your black spruce sites?

6 A. No, we are using -- in the lowland  
7 sites where the pure black spruce tends to occur, the  
8 method by which we renew the black spruce forest is  
9 through the leaving of largely the seed tree plots.

10 Q. Mr. Nicks, I would like to turn to  
11 Case Study B, the Eddy one. Now, this is a small study  
12 area, is it not, 27.9 hectares?

13 MR. NICKS: A. Certain blocks are quite  
14 small, however in the interests of maintaining the  
15 uniform site, it's desirable to concentrate the  
16 experiment on a relatively small area.

17 Q. And this was an experimental  
18 situation as opposed to a routine operational  
19 situation; is that not correct?

20 A. That's correct, yes.

21 Q. For example, I think you indicated  
22 yesterday that 11 assessments were done of results on  
23 this area and that that related to the experimental  
24 nature of the area?

25 A. Eleven survival assessments, right.

1 Q. Now, again, on the first question,  
2 our Panel 4 Interrogatory No. 1 in Exhibit 1154, we  
3 asked the cost of the silvicultural treatment on this  
4 area and you've indicated it was \$412.68 per hectare  
5 and that in terms of MNR funding, which again excludes  
6 the cost of nursery stock and herbicide?

7 A. Correct.

8 Q. Now, is this a representative cost of  
9 your artificial treatment methods on the E.B. Eddy  
10 areas or is this unusually high?

11 A. Are you referring to the MNR funding  
12 provided?

13 Q. I'm referring to the cost of the  
14 silvicultural treatments, the \$412.68.

15 MS. CRONK: Sorry, Madam Chair, the  
16 answer indicates that that is the funding level for  
17 the MNR.

18 MS. SWENARCHUK: Q. Is this  
19 representative of costs to MNR of silvicultural  
20 treatments on E.B. Eddy stands?

21 MR. NICKS: A. No, it's not. You've  
22 heard in our evidence yesterday the amount of heavy  
23 site preparation is in the order of 20 to 25 per cent  
24 at the moment so it's not representative of the  
25 majority of our area. In other words, we have



1 different rates for different intensity of site  
2 preparation.

3 Q. Now, on page 38 of the study, you've  
4 indicated in the third paragraph,

5 "With aerial herbicide released as  
6 required, stock jack pine stand of one  
7 thousand trees per hectare on this area  
8 should be achievable rotation.'

9 Now, I suggest that you are expecting to  
10 require additional herbicide release sprays; is that  
11 correct?

12 A. Not in this particular area. I  
13 believe it's free to grow.

14 Q. And does that mean in your mind that  
15 you will not be spraying with herbicides at anytime in  
16 the future?

17 A. Not necessarily. There is a  
18 possibility even in a free-to-grow condition of aspen  
19 continuing to grow and presenting a problem, and we've  
20 been discussing with the MNR the possibility of  
21 considering some of that work. I haven't been party to  
22 the discussion and I don't feel qualified to answer to  
23 the extent of those discussions.

24 Q. But you agree with me that it is  
25 possible that you could contemplate herbicide sprays

1 even after the point at which the particular stand is  
2 free to grow?

3 A. I would say that would be a very rare  
4 instance, but it is one we are cognizant of.

5 Q. Now, on page 41 you refer to -- on  
6 the first paragraph to elevating the maximum allowable  
7 depletion of the jack pine working group, and I would  
8 like you to refer now to Exhibit 68 which is the  
9 five-year review of the FMAs. Exhibit 68.

10 Do you have page 65?

11 A. We are getting it.

12 Q. Now, I'm looking at the chart at the  
13 bottom of the page which compares the maximum allowable  
14 depletion and the forecasted harvest with the actual  
15 harvest on those FMAs and we note in both cases that  
16 there is a considerable gap certainly between the MAD  
17 and even between the forecasted harvest and the actual  
18 harvest.

19 And in view of that gap my question is:  
20 Why have you indicated in the second paragraph on page  
21 41, a company such as Eddy which faces major declines  
22 in MAD once the current surface of over-mature timber  
23 is harvested requires the intensive management  
24 treatments described in the study?

25 I'm suggesting at the rate of comparison

1 here that - indicated in this chart - that E.B. Eddy  
2 does not face an immediate wood supply problem?

3 A. And you are correct in that  
4 assumption. Our wood supply problem is not immediate.  
5 We were anticipating shortfalls in the future 30 to 40  
6 years down the line and so we are simply planning --  
7 attempting to plan for the forecast allowable  
8 depletion.

9 The other point I would like to make, and  
10 Mr. Waddell with his experience at this time on the  
11 FMA, may be better qualified to answer, but I'll give  
12 you my recollection at the time. As I think the Board  
13 will recall there a significant downturn in the economy  
14 in the early '80s. Most mills were operating at much  
15 less than full capacity. Our mills were no exception.

16 Mr. Waddell could probably provide a  
17 figure in terms of what our harvest was relative to  
18 what it is now. It was considerably less, so the past  
19 in no way represents the future in terms of harvesting.

20 MR. WADDELL: A. If I might add to that,  
21 Ms. Swenarchuk, the Table 2 that you are looking at  
22 indicates maximum allowable depletion and that is for  
23 all working groups.

24 What we are talking about here in our  
25 case study is for the jack pine working group

1 exclusively and the jack pine working group component  
2 of the maximum allowable depletion is only a fraction  
3 of that. I haven't got the figures at my fingertips  
4 but I would say no more than 15 or 20 per cent of that.  
5 For example, in the upper Spanish, it shows a maximum  
6 allowable depletion of 58,176 hectares. That is all  
7 working groups.

8 The jack pine component of that may be  
9 15,000 hectares. So that you should compare our actual  
10 harvest, which was primarily in the jack pine working  
11 group, to that permissible allowable depletion of the  
12 jack pine working group only.

13 The second point I would like to make is  
14 that further what Mr. Nicks said, yes, we were going  
15 through some pretty rough times economically in the  
16 Industry in '82, '83, at the same time our Espanola  
17 pulp mill what in the process of going through a very  
18 large modernization program and we had anticipated it  
19 would be onstream sooner than it was.

20 That is one of the reasons that our  
21 forecasted harvest was greater than what the actual  
22 harvest was. At the same time our large sawmill at the  
23 Nairn Centre was in the same situation so that neither  
24 of our mills were able to take the wood during that  
25 period that we had anticipated when we wrote the

1 management plan in 1980, whenever it was.

2 The third point I would like to add here  
3 is that since 1985 and in this current -- in the period  
4 from '85 to '90, we have finally achieved our -- or  
5 very close to our harvesting levels with our mills now  
6 on production and our review that will be undertaken  
7 this June will show a lot different figures in terms of  
8 the actual harvest to the allowable harvest, and I give  
9 that to you by way of indicating to you why we have to,  
10 or feel we have to, treat our working groups as we did  
11 in the case study in the intensive fashion that we did.

12 We must have that maximized wood supply  
13 for the future because we are now getting up very close  
14 to our maximum allowable depletion. And as Mr. Nicks  
15 said, what we are doing now affects our wood supply 50,  
16 60 years from now.

17 Q. Well, if we could look at the next  
18 two pages of this report. On page 66 the reviewers  
19 indicated in the first line of the third paragraph,

20 "For the most part the company is  
21 following a clearcut implant  
22 silvicultural system."

23 A. Excuse me, where is that?

24 Q. That is the first sentence to third  
25 paragraph.



1 A. Yes, thank you.

2 Q. Then on page 67 in the third  
3 paragraph, again, they indicate that:

4 "Aerial seeding is down from that  
5 forecast, that it has been replaced with  
6 planting. Seeding has been successful in  
7 this area but it is not a reliable  
8 technique. Should this or any other  
9 regeneration method fail, the company was  
10 obliged to retreat the area at its  
11 expense.

12 "Since seeding is a much less costly  
13 approach than planting, the committee  
14 commends the company and the Ministry on  
15 agreeing to share the cost of retreatment  
16 in the upcoming operating period."

17 So retreated areas following seeding were  
18 not required to be a company expense; is that correct?

19 A. In the first five years of our FMA,  
20 that's correct.

21 I'm sorry. I think I gave you a wrong  
22 answer there, Ms. Swenarchuk. Could you please  
23 rephrase that question?

24 Q. I understand from that statement that  
25 in the period reviewed, a retreatment due to treatment

1 failure would be done on the basis of the cost -- the  
2 cost shared between the Ministry and the company and  
3 not simply at the company expense?

4 A. No. I'm glad I got back to you. I  
5 gave you a completely erroneous answer.

6 In the 1980 to '85 period had an area  
7 been aerial seeded and it failed the company would have  
8 had to bare 100 per cent of the costs of retreatment.

9 It was only in negotiating the ground  
10 rules in 1985 that would cover the period from 1985 to  
11 1990 that the Ministry and the company entered into the  
12 clause that is now called the lessor cost treatment,  
13 and that is a clause whereby should a company carry out  
14 a lessor cost treatment such as aerial seeding on some  
15 areas, and if that area failed, then the Ministry would  
16 fund the company under the normal FMA rates for the  
17 difference in cost between what the normal cost would  
18 be and what had already been spent on the initial  
19 earlier cost treatment, if you understand what I'm  
20 saying.

21 Q. So that was for the period '85 to  
22 '90?

23 A. Correct, and the first five years  
24 that was not in place, so any failure by the company on  
25 aerial seeding, the retreatment would have been

1 entirely at company cost.

2 Q. And we are now in 1990, and I assume  
3 that you are engaged in negotiations for the next five  
4 years and perhaps they have been completed.

5 Could you indicate what the practice will  
6 be with respect to this question for the next five  
7 years?

8 A. Could you define what you mean by the  
9 question, please?

10 Q. Practice. Will cost sharing, as you  
11 have described it, continue for the next five years?

12 A. Well, I didn't define this as cost  
13 sharing. If the question is do we have the lesser cost  
14 treatment clause in our new FMAs, I believe we do.

15 We are just in the process, as you  
16 mentioned, in negotiating, and now it's only a draft  
17 copy. We don't have a final version of it as yet, but  
18 I will check on that. But I do believe that it is in  
19 there but I can't guarantee it a hundred per cent.

20 MADAM CHAIR: Mr. Waddell, does the  
21 lesser cost treatment clause come into effect if your  
22 preferred treatment is more expensive and the MNR asks  
23 you to use a lower cost treatment or wherever you use a  
24 lower cost treatment, does it apply?

25 MR. WADDELL: I haven't personally

1 encountered your first situation where the Ministry has  
2 asked us to use a lower cost treatment and it has  
3 failed.

4 My understanding of where it would kick  
5 in is, for example, on a site that the ground rule  
6 prescriptions allows us to plant. Seeding may be an  
7 option, but the preferred -- one of the options, if not  
8 the preferred option, would be to plant.

9 If we feel that we have a reasonable  
10 chance of getting regeneration success through the  
11 lower cost treatment, in this case seeding, if we go  
12 ahead and do that and it fails and two or three or four  
13 years later we have to retreat, then the Ministry will  
14 fund us the difference between the cost of the  
15 retreatment and what they had already expended in the  
16 first treatment.

17 And if I can give you a simple example.  
18 Suppose the Ministry's rate of reimbursement for the  
19 first treatment is \$15 a hectare and that is what we  
20 receive for aerial seeding. If that fails and we have  
21 to plant it and suppose the Ministry then funds us the  
22 normal cost of - let me rephrase - if the normal cost  
23 that the Ministry would pay us for planting -- it's  
24 based on a thousand but let me translate it for a  
25 hectare, please.

1                   If the normal cost was \$200 a hectare -  
2           and these are just examples, they are not correct  
3           figures - then they would fund us the difference  
4           between the \$200 and the \$15. In other words, they  
5           would pay us \$185 a hectare to plant.

6                   So that their cost, their total cost, is  
7           15 plus 185 which equals the 200 which is what they  
8           would have paid us in the initial case had we decided  
9           to carry out the more expensive treatment.

10                  MADAM CHAIR: And so, in effect, when it  
11           comes to -- let me see if I understand this. When it  
12           comes to planting and planting fails, for whatever  
13           reason, you are obliged to pay the cost yourself?

14                  MR. WADDELL: That's correct.

15                  MADAM CHAIR: But whenever you seed  
16           instead of plant, the lessor cost treatment clause  
17           might come into effect?

18                  MR. WADDELL: Depending upon the way your  
19           ground rules are written, and the clause is slightly  
20           different in some ground rules, in some ground rules,  
21           it says on a site where you would normally plant if you  
22           elect to do a lessor cost treatment. Then it would  
23           kick in.

24                  MADAM CHAIR: And the reason for this,  
25           presumably, is that this MNR wishes to -- not save



1 money but somehow control the amount of money that is  
2 spent on silvicultural treatment?

3 MR. WADDELL: Yes, it is, and as a matter  
4 of fact our company was one that took great pains to  
5 try to negotiate this with the Ministry for this very  
6 reason that we felt that a company should not be  
7 penalized if we went ahead and tried to carry out a  
8 lower cost treatment initially and it failed.

9 In the first five years, anytime that  
10 situation occurred the FMA holder was penalized because  
11 normally if you do a seeding and then three or four  
12 years -- it takes three or four years to assess whether  
13 it is successful or not, and if you judge it's a  
14 failure by then you may have to go back and re-site  
15 prepare and normally plant. So you are into some very  
16 big costs. And during the first five-year period,  
17 prior to that lessor cost treatment clause being  
18 introduced, that retreatment cost would entirely be the  
19 company's.

20 So because of that, we wanted to try to  
21 get into more low cost treatment as well and the  
22 Industry and the Ministry developed this lessor cost  
23 treatment to encourage the Industry wherever possible  
24 to get into lower cost regeneration treatments.

25 MADAM CHAIR: Does it apply primarily to

1 the planting/seeding option?

2 MR. WADDELL: Primarily, but it could be  
3 used in - it could be used in - and I personally am not  
4 familiar with this, but I understand, for example, in  
5 some form of group seed tree areas where you are -- you  
6 normally would plant the area but you decide to leave  
7 trees there to cast seed on the area, that is a lower  
8 cost regeneration treatment. It can be risky, but it  
9 is a lower cost, and in that situation my understanding  
10 would be that if it fails this clause would would kick  
11 in.

12 MADAM CHAIR: Thank you.

13 MR. WADDELL: I now have the information  
14 in front me, Ms. Swenarchuk, and in our draft ground  
15 rules for the next five years, the lessor cost regen  
16 treatment is in there, and if I may read the -- and I  
17 stress these are draft yet, the Ministry has not  
18 approved them at the head office level.

19 "Where a lessor cost regen treatment  
20 fails on a site that would normally  
21 receive a more expensive regeneration  
22 treatment, the minister, subject to the  
23 review in the annual work schedule, will  
24 pay the difference between the lessor and  
25 greater rates as outlined in Schedule D."

1 MS. SWENARCHUK: Q. And to your  
2 knowledge, or perhaps other members can answer, is this  
3 provision something similar -- common in the FMAs, in  
4 the agreements?

5 Mr. Squires?

6 MR. SQUIRES: A. It's in the Spruce  
7 River Forest ground rules. In fact, generally, Mr.  
8 Waddell and I often argue and I would like to claim  
9 that we also pushed for that clause.

10 Q. Mr. Ferguson, in yours as well?

11 MR. FERGUSON: A. Yes. Our situation is  
12 very similar to the situation that Mr. Waddell has  
13 outlined in that the clause was not present in the  
14 original FMA, the '80 to '85 FMA, but was added in the  
15 '85 to '90 and again we are in the same position of  
16 currently renegotiating the '90 to '95 period and is  
17 included in the draft FMA for that period as well.

18 Q. Mr. Gemmell?

19 MR. GEMMELL: A. Yes, it is.

20 MR. FREIDIN: What was Mr. Gemmell's  
21 answer?

22 MR. GEMMELL: Yes.

23 MS. SWENARCHUK: Do you wish to rise now,  
24 Madam Chair?

25 MADAM CHAIR: Is this convenient for you,

1 Ms. Swenarchuk?

2 MS. SWENARCHUK: Perhaps just one last  
3 question.

4 Q. Mr. Waddell, I'm going to come back  
5 later to the Industry's concerns about funding levels  
6 for silviculture. But given this kind of provision in  
7 your agreements, do you anticipate that your company,  
8 for example, will attempt to use lessor cost treatments  
9 more frequently given the funding levels available? It  
10 seems to me it is a kind of insurance for you if you  
11 did .

12 MR. WADDELL: A. On the upper and lower  
13 Spanish Forest our regeneration efforts are primarily  
14 aimed at jack pine, so we don't have that many options.  
15 We either plant or we seed.

16 So those are about the only options we  
17 have for regeneration of jack pine, and already in the  
18 '85 to '90 period we are artificially regenerating a  
19 higher percentage of the area by aerial seeding than  
20 what we did in the first five years.

21 I think, though, by 1990, we have  
22 probably reached about as high a percentage as we can  
23 go in terms of the sites that we can aerial seed  
24 because as we've tried to point out to the Board on the  
25 rich uplands sites where competition is a real problem,

1       aerial seeding is very risky because of the competition  
2       from the hardwoods.

3                   And I can't speak for any other company,  
4       but I do feel that this clause has been very effective  
5       in helping to develop a better awareness of low cost  
6       regeneration treatments. And I also should say, too,  
7       there is another element here, and that is the learning  
8       curve that we were all on in starting 1980 and so  
9       forth.

10                   It takes a while to get some confidence  
11       into prescribing the silvicultural treatment that you  
12       you are going to for any site and there is a certain  
13       reluctance to go to a more risky silvicultural  
14       technique.

15                   Now that we've got a few years under our  
16       belt, we are better able to look at a site and have  
17       confidence as to where the lower cost treatment has a  
18       reasonable chance of success.

19                   Q. Does any other member of the Panel  
20       wish to comment on this question, the question being:  
21       Given Industry concerns about silvicultural funding  
22       levels and given the lessor cost provision in the FMAs,  
23       do you anticipate using more widely the less intensive  
24       methods? Mr. Squires?

25                   MR. SQUIRES: A. I'm not sure I can say



1 I anticipate it in the sense of being able to specify  
2 an area that we will be working on. However, I can  
3 state that we are quite actively talking with our field  
4 supervisors and seeking out opportunities to utilize  
5 this clause more effectively than we have in the past.

6 Q. Mr. Ferguson?

7 MR. FERGUSON: A. I believe it is our  
8 practice to try to do things in the most economical way  
9 possible.

10 If I can refer back to our activities on  
11 the English River Forest, for instance, I indicated  
12 earlier that approximately 65 to 70 per cent of the  
13 fire renewal activities were artificial. Of that 65  
14 per cent planting normally would account for 15 to 20  
15 per cent of the remainder of that being the lessor cost  
16 treatment of seeding.

17 Q. And you don't foresee any changes in  
18 those proportions?

19 A. Not in the foreseeable future, no.

20 Q. Mr. Gemmell?

21 MR. GEMMELL: A. I don't see a big  
22 change because the sites are quite different. The  
23 sites, as I've illustrated before, the uplands clay  
24 sites, are not conducive to the lower method of  
25 regeneration because of the competition problems.

1                   There is an area in the middle there  
2                   where there is little saw off coming down slope or  
3                   coming up slope, low slope definitely, lower cost regen  
4                   methods. And again as we are on the learning curve  
5                   there could be that opportunity. Where we can apply  
6                   the low cost treatment, we certainly will, and that is  
7                   again back to the advanced growth advantage.

8                   MS. SWENARCHUK: Thank you.

9                   Madam Chair?

10                  MADAM CHAIR: All right. Why don't we  
11                  take our break for lunch now.

12                  MR. FREIDIN: Just one matter, Madam  
13                  Chair. I was advised by Ms. Devaul that the Anglers &  
14                  Hunters indicate that their cross-examination, if it  
15                  starts tomorrow at 8:30, I guess it would be eight  
16                  o'clock, we could tell them --  
17                  ---Discussion off the record.

18                  MR. FREIDIN: They would be through at  
19                  lunch, and Ms. Devaul asked whether I would be ready to  
20                  go after lunch.

21                  I can advise the Board that I will. I  
22                  should advise, however, counsel for MOE, that my  
23                  estimates are sometimes lengthy, just to cover myself,  
24                  and perhaps she should consider being ready to go in  
25                  the middle of tomorrow afternoon because I may be

1 finished in a couple of hours as opposed to the four  
2 hours I suggested I would be.

3 MS. SWENARCHUK: I can indicate, Madam  
4 Chair, I'm proceeding much more slowly than I  
5 anticipated. I still hope to finish today, but I'm not  
6 sure.

7 MADAM CHAIR: Ms. Seaborn, you'll be  
8 prepared for tomorrow, if needed?

9 MS. SEABORN: I'm always ready to follow  
10 Mr. Freidin.

11 MS. CRONK: Madam Chair, could I just  
12 raise a point for the consideration of the Board and  
13 perhaps the comment of other parties. And it's really  
14 not raised in a complaint sense at all, but in the  
15 sense on behalf of the OFIA/OLMA counsel of trying to  
16 assist with the process.

17 We've had some discussions among  
18 ourselves as counsel about the scoping sessions of late  
19 and how they have been, from our perspective,  
20 proceeding in the way that assists in the timing and  
21 the planning of witnesses' attendances.

22 I recognize, of course, that the MNR has  
23 had to deal with this for far longer than we in terms  
24 of making witnesses available, but now that the  
25 hearings have moved to Toronto, of course, there is the

1 aspect of bringing witnesses, from our client's point  
2 of view, from northern Ontario to Toronto and trying to  
3 schedule a panel of seven and eight people at once.

4 But the point on which I rise is simply  
5 this: That while the intent, as we understood it, was  
6 originally the scoping sessions would provide all  
7 parties, and particularly that party that was then  
8 leading its evidence, with some indication as to the  
9 length of time anticipated -- obviously no one can be  
10 definitive about this, that cross-examinations were  
11 going to take which helps with respect to timing -- but  
12 particulars as well of areas on which cross-examination  
13 was going take place to clarify the issues. It allows  
14 us to ensure that the witnesses have the right paper  
15 with them, that they have read it in advance, and that  
16 we have some idea of the length of time it's going to  
17 take.

18 I'm always grateful when any counsel at  
19 the hearing indicates they are going to be less time  
20 rather than longer than they thought, but the OFAH in  
21 this case provides a good example.

22 We have no estimate at all for a very  
23 long time, despite correspondence from us, as to how  
24 long they were likely to be in cross-examination. I  
25 had a very really practical problem as it happens in



1 this case because of the Professor McCormick's illness  
2 that we had the deal with in terms of scheduling.

3 Then the word when we received it was it  
4 was going to be a day, now, it's half a day. That is  
5 fine. We are grateful for that. I still have no idea  
6 whether the paper the witnesses were to -- we have no  
7 particulars at all because they failed to attend the  
8 scoping section as to what areas they intended to  
9 explore, whether there is exhibits they wished me to  
10 review.

11 I understand that there is some  
12 obligations to communicate among counsel, but I just  
13 raise the matter now because all we can do is what the  
14 MNR did and plan the best we can, but it seems to me  
15 that some of the purpose that the Board sought to have  
16 put in place in the scoping sections is being defeated  
17 and I raise it, and make no further comment.

18 I don't think, in light of what Ms.  
19 Swenarchuk has said, that I should change our timing  
20 for Monday, but I have to bring people in from out of  
21 the jurisdiction from the north and we will do that and  
22 they will be here and we'll be ready whenever the Board  
23 wants us to go. That is it. We will.

24 But having said that, it seems to me  
25 there is some obligation on parties to inform the Board



1 and parties most likely to be affected by it of a  
2 realistic time estimate when they can and of the  
3 documents they intend to refer to, and there has been  
4 an effort by a great many people to do that but it  
5 isn't always the case and it's extremely difficult.

6 And I raise it and point it out only  
7 because of the experience. Again last evening there's  
8 been some discussions among counsel of the OFIA/OMIA  
9 and our concern about arranging the timing of all of  
10 this and there's a good example of it again.

11 So, I offer that in an effort to be of  
12 assistance and I invite, I suppose, comment of others  
13 if they feel that appropriate.

14 MADAM CHAIR: Thank you, Ms. Cronk, but  
15 we are not going to enter that discussion now, but Mr.  
16 Martel and I intend to say something about scoping and  
17 we have yet to make public our response to the proposal  
18 by the parties in terms of the draft negotiations and  
19 that schedule and I think perhaps we should set aside  
20 an evening next week at five when we will discuss these  
21 matters and the parties can make submissions.

22 MS. CRONK: I have been unaware of that.  
23 Thank you.

24 MS. SWENARCHUK: Madam Chair, with regard  
25 to that schedule discussion, may I just inform the

1 Board that I cannot be available at any day next week  
2 because of previous commitments. I'm out of the city  
3 after five o'clock. If it could be another day --

4 MADAM CHAIR: Yes, Mr. Martel and I will  
5 talk about that at the lunch hour.

6 We will be back here at quarter to two.

7 MR. FREIDIN: Madam Chair, again, as a  
8 matter of procedure, does that mean that we'll hear the  
9 outline of Forests for Tomorrow's case on the 15th of  
10 the month during normal sitting hours then? Because  
11 that was one thing I think we scheduled for the 15th.  
12 I assumed that that would have been after five o'clock  
13 but I wouldn't want to, I think, lose the opportunity  
14 to be advised of that matter and have that put off for  
15 another week.

16 MADAM CHAIR: Ms. Swenarchuk, why don't  
17 you look over your calendar at the lunch hour and we'll  
18 see what is scheduled next week.

19 MS. SWENARCHUK: Thank you.

20 Thank you, Mr. Freidin, for reminding me  
21 of that. I was going to raise it with the Board and,  
22 if anything else, perhaps provide the outline by  
23 correspondence prior to the 15th.

24 MADAM CHAIR: I think that would be  
25 satisfactory if you've got a written outline to the

1 parties, and if there was a need to discuss it we could  
2 meet the week after or whenever to do that.

3 MR. FREIDIN: If that is the only option,  
4 yes. I'm saying there may be a number of questions I  
5 may want to ask and the sooner I get the answer the  
6 better. It's something that my client has been  
7 awaiting for sometime so we can prepare ourselves.

8 MADAM CHAIR: Ms. Swenarchuk, perhaps you  
9 can inform the Board this afternoon when you think you  
10 can distribute a written outline to the parties.

11 MS. SWENARCHUK: Yes.

12 ---Luncheon recess at 12:15 p.m.

13 ---On resuming at 1:50 p.m.:

14 MADAM CHAIR: Please be seated.

15 MS. SWENARCHUK: Madam Chair, relative to  
16 your question this morning about my providing an  
17 outline or, as I recall the order schedule delivery  
18 witness statements, if it would be helpful to the Board  
19 I could be here on Monday during the day.

20 Now, I don't know what time the Board  
21 intends to start this Monday. I thought that the  
22 intention would be on Mondays to start later in the  
23 morning.

24 MADAM CHAIR: Yes, we are starting at  
25 8:30 this Monday.

1 MS. SWENARCHUK: Since I can't be here  
2 after five next week or would you like me to come on  
3 Monday?

4 MADAM CHAIR: Yes, why don't you come on  
5 Monday, and will it take any longer than 15 minutes?

6 MS. SWENARCHUK: I wouldn't think so.

7 MADAM CHAIR: Why don't you come in about  
8 11:30 on Monday.

9 MS. SWENARCHUK: Fine.

10 Before I go on, I want to be sure of the  
11 question that I thought I had asked this morning, but I  
12 think I didn't; that is:

13 Q. I would like each of the four of you  
14 managing FMAs to tell me whether within your FMA  
15 structure there is a provision for payments to the  
16 company for the use of block or stripcutting for  
17 natural regeneration purposes.

18 Mr. Waddell?

19 MR. WADDELL: A. A provision within our  
20 FMAs for payment for block or --

21 Q. Stripcutting for natural  
22 regeneration.

23 A. Not to my knowledge.

24 Q. Mr. Squires?

25 MR. SQUIRES: A. Not to my knowledge.

1 Q. Excuse me. Are you indicating then  
2 that to your knowledge, within your FMAs, there are no  
3 such payments?

4 MR. WADDELL: A. Yes, that is what I'm  
5 indicating.

6 Q. Mr. Squires?

7 MR. SQUIRES: A. That is what I'm  
8 indicating.

9 Q. Mr. Ferguson?

10 MR. FERGUSON: A. There is no such  
11 provision in our FMAs.

12 Q. Mr. Gemmell?

13 MR. GEMMELL: A. There is no such  
14 provision.

15 Q. Thank you.

16 Now, Mr. Nicks, going back to Case Study  
17 B, we discussed this morning the intensity of these  
18 treatments and the cost as reflected in the response to  
19 interrogatory. This is really a stand conversion  
20 project; is it not, species conversion?

21 MR. NICKS: A. Certainly for the poplar  
22 working group it would involve a change of working  
23 group to jack pine for portions of the case study area  
24 which were jack pine working group. It would simply be  
25 the perpetuation of that work. The other point I would



1 make is we made in our case study that we anticipate an  
2 aspen component to remain in the stands.

3 Q. Now, given the cost and the intensity  
4 of the treatments required in this kind of management,  
5 do you expect to apply this type of management to  
6 considerable areas within your FMA areas?

7 A. No. I think I've outlined to the  
8 Board our expectation of 20 to 25 per cent of our site  
9 prepared area being treated in this fashion.

10 Q. And --

11 MR. WADDELL: Excuse me. May I add  
12 something to that, Ms. Swenarchuk?

13 A. In the draft ground rules that we  
14 have just negotiated with the MNR for a period '90 to  
15 '95, the amount that we can do is capped at 25 per  
16 cent.

17 Q. And would you have an approximation  
18 of the area that that involves in hectares or that you  
19 would expect it to involve?

20 A. I would have to go to the graph that  
21 we showed yesterday for 1988 and work back from there.  
22 It would be no problem to get. I just don't have it in  
23 my head right now.

24 Q. Perhaps you would like to look at --

25 MR. NICKS: A. Figure 8.

1 MR. WADDELL: A. I would say somewhere  
2 in the 15- to 1600 hectare per year on the upper and  
3 lower Spanish.

4 Q. Now, to your knowledge, why is that  
5 capped in your current FMA ground rules or draft ground  
6 rules?

7 A. I wasn't privy to the actual  
8 negotiations this year. I would ask Mr. Nicks if he  
9 could answer that as he sat in on some of the  
10 discussions.

11 MR. NICKS: A. I point out that I only  
12 sat in on some of the discussions. Those types of  
13 negotiations are handled by our forest management  
14 supervisor in Espanola.

15 The recollection that I have or the  
16 rationalization I would give is that through an  
17 internal study in terms of how much regeneration we  
18 need to perform now to provide for our stated wood  
19 supply target 70 years hence, we determine that that is  
20 the level of heavy site preparation that we need to  
21 accomplish, and presumably in an atmosphere of  
22 constrained funding the Ministry of Natural Resources  
23 was happy to hear that.

24 Q. And was that 15- or 1600 hectares on  
25 one FMA?

1                   MR. WADDELL: A. No, it's on the upper  
2                   and lower Spanish Forest combined, which is what they  
3                   are talking about here.

4                   Q. Could we go back now to Exhibit 68  
5                   and page 68, and that's the fifth-year review.

6                   A. Could you repeat the pages, please.

7                   Q. Page 68 also.

8                   A. Page 68. Thank you.

9                   Q. Now, Table 3 on that page sets out  
10                  totals of the harvest cut areas, that is, and cost.  
11                  I'm looking now at areas of the harvest cut and the  
12                  regeneration techniques and we see that the cut was  
13                  about 11,460 hectares. The total regeneration was --

14                  MS. CRONK: Sorry, what was the last  
15                  number?

16                  MS. SWENARCHUK: 11,460 hectares.

17                  Q. The total regeneration -- it's about  
18                  half-way down the column, down the table, the left-hand  
19                  column -- was 4,418 hectares.

20                  Now, we also see that there was no strip  
21                  or seed tree cutting done, that's in the same column,  
22                  but there is a total of natural regeneration of 207  
23                  hectares. I wondered what type of treatment, if any,  
24                  was applied to those 207 hectares.

25                  And my second question, which you may

1 want to consider at the same time, is this: My  
2 subtraction, which we've already discovered isn't very  
3 good but I think it's right here, leaves a different in  
4 cut and regeneration of 7,042 hectares. And I'm  
5 wondering what was done with that area? Was it left  
6 for natural regeneration? Is this what was considered  
7 untreatable? Could you help us with that?

8 MR. WADDELL: A. Yes. I'm not sure I  
9 can answer your second question as to what that 207  
10 hectares constitutes. I'm unclear in my own mind  
11 exactly what it is.

12 I'll try and answer the first, or the  
13 latter part of your question dealing with the  
14 relationship of the total regeneration effort to the  
15 total harvest cut.

16 This table includes only the company's  
17 regeneration efforts. It does not include the  
18 Ministry's. Our agreement was signed in August of 1980  
19 which was too late to carry out any appreciable amount  
20 of regeneration work in 1980, so it was really 1981  
21 before we got into any work.

22 And as has been explained to the Board in  
23 the first year of the regeneration program in terms of  
24 the planting, for example, the Ministry was responsible  
25 for 75 per cent of the planting and the company 25 per

1 cent, and then in the second year it increased so that  
2 it took five full years for the company to actually  
3 completely phase in to doing the full renewal program  
4 and the Ministry to phase out so to get a true picture  
5 to compare the actual amount of silvicultural work  
6 carried out on the area for that five-year period you  
7 would also have to have the Ministry of Natural  
8 Resources regeneration efforts during that same period  
9 and add them on to ours, and I haven't got that  
10 information.

11 Q. I realize you don't have it with you.  
12 Is it available to the company? Can it be produced?

13 A. I would think so.

14 Q. I'll ask you then to investigate  
15 whether it's available and if it is available to  
16 provide me with the information.

17 MS. CRONK: May I be clear? That is the  
18 extent of renewal efforts by the Ministry of Natural  
19 Resources for the companion period in this table?

20 MS. SWENARCHUK: Q. Or my question more  
21 specifically is: What was done in relation to the  
22 7,042 hectares that are the difference between the cut  
23 and regeneration efforts which Mr. Waddell says would  
24 accompany.

25 MR. WADDELL: A. You will appreciate, of



1 course, that we are not talking the same time period  
2 here, that that harvest cut and the renewal area do not  
3 coincide -- they don't coincide in the sense of the  
4 same time period as some of the area that we would be  
5 treating was cut prior to 1980, and that makes  
6 comparing the figures very difficult.

7 We are comparing apples and oranges here  
8 in trying to match the harvest cut against the total  
9 regeneration program. Some of the area, for example,  
10 treated in 1980 would have been cut in 1978.  
11 Similarly, there is also NSR lands in here that were  
12 treated.

13 Q. But the harvest figure, though, is  
14 for those five years, is it not?

15 A. No. Excuse me, yes, it is. It's for  
16 the 1980 to '85 period, but some of those -- for  
17 example, areas treated in -- or areas harvested in 1984  
18 would not have been treated in this table. They  
19 probably would not have been treated until 1986 because  
20 we try to leave a one-year delay in there before we  
21 start our renewal treatments in many cases so that we  
22 are not -- our renewal operations are not right on top  
23 of the harvesting operations.

24 All I'm pointing out, Ms. Swenarchuk, is  
25 the problem of trying to match our regeneration

1       hectares for that five-year period against the harvest  
2       cut because they don't cover the same period of time.

3               Q. Well, my concern, Mr. Waddell, is to  
4       know what treatments, if any, were used on the  
5       harvested areas. And since, as you pointed out, those  
6       treatments were not all done by the company, then my  
7       concern is with that 11,460 hectare harvest figure, and  
8       whatever information you can provide me on that, I  
9       would appreciate it.

10              A. I'm sure I will be able to provide  
11       you with the area treated by the MNR over the same  
12       five-year period. We can certainly get that. Do you  
13       wish me to see if I can find any information on that  
14       207 hectares?

15              Q. I would appreciate that, yes.

16              Mr. Squires, now, turning to Case Study  
17       4C in Panel 4. At the beginning of the case study the  
18       abstract in small numbers, page 3, summarizes the  
19       treatment that the area received. And just to  
20       summarize, you will agree that there were three cuts  
21       over 28 years, were there not, beginning in 1954, but  
22       no regeneration efforts until 1982?

23              MR. SQUIRES: A. That's correct.

24              Q. And then there was a very intensive  
25       treatment of regeneration; is that correct?

1                   A. Relatively speaking, I would have to  
2 acknowledge the Spruce River Forest, the level of  
3 regeneration carried out on this case, that it  
4 wasn't....

5                   Q. And it was expensive, was it not? I  
6 think your response to Forests for Tomorrow  
7 Interrogatory 1A indicates the cost was \$595.83 per  
8 hectare?

9                   MS. CRONK: Again, at funding rates  
10 provided by the MNR?

11                  MR. SQUIRES: Excuse me, which  
12 interrogatory number?

13                  MS. SWENARCHUK: Q. Looking at Exhibit  
14 1154 filed this morning and the response to 1A on the  
15 front page, Case Study 4C.

16                  MR. SQUIRES: A. Which interrogatory  
17 number was it?

18                  Q. 1A, Panel 4.

19                  A. I finally have it.

20                  Q. So then towards the bottom of the  
21 page is the response to our question about the cost of  
22 treatment on this area.

23                  A. And the question is --

24                  Q. Consider that fairly expensive  
25 treatment?

1                   A. Relative to today's terms in today  
2 dollars versus the dollars at this time, yes, it is.

3                   Q. Was it not relatively expensive at  
4 that time as well?

5                   A. That is what I'm trying to say, yes.

6                   Q. Right.

7                   And that figure does not take into  
8 account the cost of stock which was an MNR  
9 responsibility?

10                  A. That's correct.

11                  Q. Now, at page 4 of your study --

12                  A. Page 4, Roman numeral?

13                  Q. Arabic 4.

14                  A. I have it.

15                  Q. At the end of -- in the second  
16 paragraph you, shall we say, summarized the history of  
17 this site and the disturbances and harvesting that had  
18 occurred, and you indicate in the last line, last  
19 sentence of that paragraph:

20                         "Because of this competition there has  
21 been a transition with each  
22 disturbance away from less aggressive  
23 softwoods to a predominance of hardwood  
24 species."

25                         Now, would you agree that the harvesting

1 activities that occurred between 1954 and '82  
2 contributed to the emergence of hardwood on the site?

3 A. I would say that any disturbance on  
4 that standing site condition would have contributed to  
5 the advent of hardwood. So in that sense they  
6 harvested to the increase in hardwood on that site.

7 Q. Now, if the original cut or cuts had  
8 been in strip or blockcuts, would you have expected a  
9 higher softwood component than was in the stand at the  
10 time of your regeneration efforts?

11 A. Let me see if I understand your  
12 question. Would I consider modified or stripcuts at  
13 the time of the initial harvest in 1954, '56, to have  
14 contributed a higher level of softwood than was  
15 currently there in 1981?

16 Q. Yes.

17 A. No, I would not.

18 Q. Why is that?

19 A. Because of the extreme competition  
20 that would be on the ground on the cut area between the  
21 strips, that I would not anticipate very much softwood  
22 regeneration to have taken place.

23 I would anticipate the competition that  
24 developed on or that would develop on the cut areas  
25 between the strips would be identical to what developed



1 on the clearcut area.

2 Q. And the last paragraph of that  
3 page -- now, when you make that response, Mr. Squires,  
4 do you have in mind any particular dimensions for  
5 strips, for example?

6 A. Not really. I would think the strip  
7 of, say, 35 to 40 metres of the cut strip that wide  
8 would probably develop this same type of vegetation.

9 Q. So even at that size, it is your  
10 position that vegetation response would be the same?

11 A. Yes.

12 Q. Was the harvesting over those years  
13 carried out by your company?

14 A. The harvesting between 1954 to '56  
15 was carried out by what is now Abitibi-Price.

16 Q. And did your company have a licence  
17 for that land previous to the signing of the FMA?

18 A. Yes, we did.

19 Q. In the period immediately before the  
20 signing of the FMA?

21 A. Yes, we did.

22 Q. Now, you indicate in the last  
23 paragraph of the page that during negotiations for the  
24 Spruce River Forest FMA it was the company's objective  
25 to return to the extent practical to former softwood

1 and mixed wood cover types to softwood?

2 A. That is correct.

3 Q. Now, why did the company not initiate  
4 any action for that conversion prior to the signing of  
5 the FMA?

6 A. We were not responsible for the  
7 silvicultural activities on the licence.

8 Q. But presumably the company saw the  
9 problem at that point and didn't just see it when the  
10 FMA was signed. The problem was not being resolved.

11 Did the company not have the option and  
12 was concerned about that land base to initiate some  
13 silvicultural activities?

14 A. Certainly we live in a free society.  
15 We have the option, I would suggest, but not being a  
16 palatable option because it was not legally as such our  
17 responsibility, and I don't believe the incentive  
18 exists at that time, but it exists under FMA today.

19 Q. You mean the financial incentives?

20 A. No, I mean the incentive to guarantee  
21 a long-term wood supply. In my opinion, that is the  
22 driving force behind FMA.

23 Q. In that case, Mr. Squires, is it your  
24 view that the regeneration activities of the FMA  
25 holders and the extent of them would continue or will

1 continue even if the funding base is reduced?

2 A. I would have to address that as a  
3 hypothetical question, and in that sense I prefer not  
4 to address it.

5 Q. If the driving force for regeneration  
6 activities is, in your view, a long-term tenure, then  
7 are you suggesting that the financial arrangements of  
8 the FMA system don't play a role in the regeneration  
9 activity levels?

10 A. The senior vice president or  
11 executive vice president of my company, I think, has  
12 spoken to the fact that our company is currently  
13 putting mines into FMA. Beyond that, I really can't  
14 speak for company's intent.

15 Q. Frankly, Mr. Squires, I understood  
16 from Panel 8 evidence that funding levels for these  
17 silvicultural activities are very important to the  
18 company and that, in fact, your witness statement,  
19 Panel 8 witness statement, contains examples of changes  
20 in silvicultural prescriptions due to reduced funding.  
21 Surely funding plays a role in the levels of  
22 silvicultural activities and the types of prescriptions  
23 applied?

24 A. I think you are implying something  
25 that hasn't happened. We haven't changed

1 prescriptions. Prescriptions are available and we make  
2 a different choice of prescriptions.

3 Q. Yes, exactly. And, surely, it's been  
4 Mr. Waddell's evidence that some of those prescriptions  
5 have been the less preferred prescriptions because of  
6 reduced funding levels?

7 A. That is correct.

8 Q. But is it your position that the  
9 funding levels do not have a role in -- my question  
10 again -- the levels and prescriptions of silvicultural  
11 activities that the company has carried out?

12 A. I feel not. I know there are places  
13 where we need prescriptions relative to what is in the  
14 ground rules Table 1 because of the site requirements  
15 and certainly we think about the funding in the sense  
16 of the annual budget, et cetera, and flow around that  
17 budget, but the choices are made on the basis of such  
18 requirements, generally speaking.

19 Q. Does that mean that my clients could  
20 take the position before the Board that funding to the  
21 FMAs should be reduced or eliminated and the funds used  
22 elsewhere and rest comfortably that the regeneration  
23 efforts were to continue at the same level that they  
24 are now and the same degree of success?

25 MS. CRONK: If my friend wishes to

1 rephrase that question I won't object to it, but as  
2 framed I do. Your clients can do what they see fit.  
3 The level of comfort is not something for my clients to  
4 comment on.

5 MS. SWENARCHUK: Q. Mr. Squires, would  
6 you be confident and would you be able to assure the  
7 public so that it would be confident that elimination  
8 of funding to the FMAs or regeneration programs would  
9 not have a significant impact on the degree to which  
10 our forest lands are being regenerated?

11 MR. SQUIRES: A. Really, Ms. Swenarchuk,  
12 that's outside my area to be able to judge for my  
13 company. I'm in a divisional forest capacity. I do  
14 not handle the company's purse strings and budgeting,  
15 and the decision is outside my capacity.

16 Q. Well, you expressed your opinion that  
17 the driving force for the FMA structure is the tenure.  
18 Surely as an experienced professional in the field, you  
19 have an opinion about whether the funding levels play a  
20 role as well?

21 A. In the sense that they support our  
22 ability to guarantee that tenure, they are essential.

23 Q. "Guarantee the tenure" meaning having  
24 a long-term wood supply; is that correct?

25 A. Yes. I look upon the FMA as a



1 package of responsibilities, both the company's and the  
2 Ministry of Natural Resources for the Government of  
3 Ontario, where we have both signed an agreement and had  
4 accepted obligations, and the obligation that we see of  
5 the Ministry of Natural Resources, or one of the  
6 obligations, is to fund the silvicultural efforts that  
7 we mutually agree to.

8 Q. And it's your position that if that  
9 funding to your company was eliminated -- sorry.

10 Are you saying that you are not able to  
11 comment on what the impact on your activities would be  
12 if the FMA funds were omitted?

13 A. That's a fair assessment of what I've  
14 said.

15 Q. Do you disagree then with the  
16 sections of the Panel 8 witness statement in which the  
17 Industry witnesses emphasize the importance of  
18 silvicultural treatment funding?

19 A. What are we talking about  
20 specifically, please?

21 Q. Well, if you could look at page --  
22 starting at page 149, please, or start at page 147  
23 where the witness statement refers to the task force  
24 report, the task force and foresting management  
25 agreements. And then it states in the second last

1 paragraph on the page that,

2 "The Industry supports and endorses  
3 these recommendations and strongly urges  
4 the immediate completion of the new TPP  
5 and implementation schedule together with  
6 an assured government funding commitment  
7 for renewal of the timber resource."

8 Do you agree with that statement?

9 A. Yes, I do.

10 Q. And do you agree or do you have any  
11 concern about the problem identified on the third  
12 page -- third paragraph of page 149:

13 "...that a new TPP is vital  
14 in this regard has been strengthened by  
15 recent indications in some areas that the  
16 MNR may not be in a position to  
17 adequately fund the regeneration of  
18 silvicultural treatments contemplated for  
19 Crown lands in the area of the  
20 undertaking. This has been suggested by  
21 1989-1990 cutbacks in some areas for  
22 silvicultural treatments."

23 And then the documentation that follows  
24 afterwards to which members of the Panel have testified  
25 about the use of less than preferred or other than

1 preferred regeneration prescriptions because of  
2 these -- because of the seedling cap and these --  
3 because of the seedling cap, yes.

4 Now, do you have a concern about those  
5 problems as well?

6 A. Yes, I do.

7 Q. On page 150 and 51 we see details of  
8 reductions in planned activities apparently related to  
9 the cutbacks. Is that not a reflection that changes in  
10 the funding level do have an impact on the regeneration  
11 activities carried out?

12 A. It had an impact in the one year,  
13 yes.

14 Q. And on page 151 in the last  
15 paragraph,

16 "Surely the cutbacks will affect the  
17 future years."

18 If you look at the fourth line at the  
19 bottom of the page:

20 "For example, funding cutbacks in 1989  
21 to site preparation proposals will  
22 prevent sufficient areas from being  
23 prepared in 1989 to meet planting and  
24 seeding objectives for 1990 and so on  
25 from year to year. Constraints of this

1 type have an immediate  
2 impact....continuing adverse impact  
3 on...."

4 Do you agree with that?

5 A. I agree in the sense that site  
6 preparation reduction in 1989 would have to impact on  
7 the ability to plant that area and may be negative.

8 Q. And do you agree with the statement  
9 in the middle of this page, page 152:

10 "Provision of adequate government  
11 funding for silvicultural treatments is  
12 essential to the achievement of renewal  
13 objectives and targets."

14 And then the italicized section,

15 "The reason being if a long-term  
16 government funding commitment to renewal  
17 is not made and other funding results,  
18 this will be a direct and material factor  
19 influencing the ability on the MNR and  
20 the industry to adequately renew the  
21 timber resource in the area of the  
22 undertaking."

23 Do you agree with that?

24 A. Yes, I do.

25 Q. Mr. Gemmell, could we turn to Case

1 Study 4D, please?

2 MR. GEMMELL: A. I have it.

3 Q. And looking at the outline of the  
4 case study in the Panel 4 witness statement on page 26,  
5 we see a description of the methods of harvest that  
6 were used on the area.

7 A. Excuse me?

8 Q. Page 26.

9 A. Of the case study?

10 Q. That's right.

11 A. I'm sorry. This is the Case Study D?

12 Q. That's correct, in Panel 4. Page 26,  
13 Method of Harvest?

14 A. Okay, yes.

15 Q. So just to quickly summarize. There  
16 were three blocks, Block A was clearcut, Block B was  
17 shall we say patch cut and --

18 A. Block B was cut leaving groups of  
19 seed trees?

20 Q. Okay. Yes.

21 And Block C was cut in alternate blocks

22 A. Alternate blocks.

23 Q. Now, would you agree with me that  
24 when deciding on the layout and the size of blockcuts  
25 there are a number of factors to consider for



1 maximizing the natural regeneration results?

2 A. Natural from what, seed, from  
3 anything?

4 Q. I'm talking about blockcuts now.

5 A. Yes. So you are asking regeneration  
6 from seed, seed only?

7 Q. Yes.

8 A. You are asking for seed only.

9 Q. If I'm looking for natural  
10 regeneration--

11 A. Period.

12 Q. --to follow from a blockcut, I'm  
13 going to suggest that there are a number of factors  
14 that should be considered in laying out the cut; such  
15 factors as the productivity of the site, whether it's  
16 uplands or lowlands, drainage patterns, the forest  
17 floor composition, including the types of mosses, and  
18 the geography of the site. Would you agree with that?

19 A. In terms of seeding, seeding -- that  
20 is what you are asking?

21 Q. Yes. In terms of attempting to  
22 enhance the degree of natural regeneration which  
23 results after the cut.

24 A. Yes. This was one attempt at that,  
25 and I'm just trying to get that straight because I've

1 indicated that our main objective is to maintain the  
2 advance growth if it's present. So there's two things  
3 there. So those items that you are listing would not  
4 be so important if the advance was present.

5 Q. Would they not, however, be of  
6 assistance even where there is advanced growth in  
7 obtaining enhanced natural regeneration results?

8 A. They would be if the advanced growth  
9 was not adequate and the seeding would aid in that.

10 Q. Now, in Exhibit 1154, which was filed  
11 this morning, just refer to it briefly, Forests for  
12 Tomorrow Interrogatory No. 27 was directed towards the  
13 size of the block and stripcuts. And without dwelling  
14 on it, I'll just point out for the record that the  
15 dimensions are provided there?

16 A. Yes.

17 Q. You had the opportunity to ask Mr.  
18 Hopkins how those dimensions were determined, and he  
19 replied -- and this is transcript from Volume 194 at  
20 page 34,356 beginning at line 7, my question at line 3  
21 was: "We asked for the sizes of the blocks and  
22 stripcuts used in part of your case study area," and  
23 the answer provided those dimensions, and my question  
24 is: "How were these dimensions determined?"

25 And his answer was: "Those dimensions

1                   roughly 500-foot wide by 900-foot wide  
2                   blocks, is roughly equivalent to the  
3                   historical site of the patch that's  
4                   allocated to a piecework cutting crew.  
5                   That is a two-man cutting crew with  
6                   chain saw and forwarding the wood with a  
7                   skidder. There was no -- it's an  
8                   arbitrary size of 500- by 900-foot and  
9                   the blockcut layout followed that  
10                  pattern."

11       Then at line 21:

12                   "And what about with regard to the  
13                   strip cut, 264 feet by 900 feet with the  
14                   same criteria?"

15       And the answer was:

16                   "I would only assume that it was the  
17                   original block layout arbitrary 500 by  
18                   900 feet divided into two. And this  
19                   would have been, as I said, the idea of a  
20                   Blockcuts in that time was to leave an  
21                   adjacent seed source and, of course, it  
22                   would have made that prescription --  
23                   would have felt that that was an  
24                   appropriate distance for strip wood to  
25                   allow pursuing it."

1                   Now, you will agree with me that from  
2                   that description of how the dimensions were arrived at,  
3                   apparently there wasn't any consideration of a  
4                   particular characteristic of the site involved in  
5                   arriving at those dimensions?

6                   A. Actually, the way that was arrived at  
7                   was originally there were trials of two chains, three  
8                   chains, five chains, and then we - as the experience  
9                   was gained with those - we ended up with four chains,  
10                  which I think was exactly half the normal width of a  
11                  blockcut, normal patch cut, and after that was looked  
12                  at then we went double that to the normal A chain block  
13                  or 500 and some feet.

14                  There was a lot of different trials of  
15                  the different widths to establish, and at time that was  
16                  exactly what was being studied, the amount -- the  
17                  effect of the strip width for seeding on the various  
18                  sites. Those are low sites also that we are talking  
19                  about.

20                  Q. So in your view, are you saying the  
21                  dimensions were designed for the particular site?

22                  A. They were designed to test the  
23                  adequacy of the seed fall, yes, at the time, based on  
24                  the site, yes, seedbeds of moss.

25                  Q. They were designed to test the seed

1 fall. I see.

2 Now, at page --

3 A. Designed to test where the seed will  
4 fall and establish, yes. That's what I'm saying.

5 Q. So are you saying that this width was  
6 in the natural of a test width?

7 A. These tests go back to 1971 in terms  
8 of widths of strip and the effect of seed fall.

9 Q. On page 43 of the study you indicate  
10 this document was obtained on various blocks?

11 A. Again, please?

12 Q. Page 43 of the study in the third  
13 paragraph?

14 A. Yes.

15 Q. And you indicate that the planted  
16 block, which was A, had an average stocking of 65 per  
17 cent and the natural regenerating areas, B and C, were  
18 at about 52.5 per cent?

19 A. Yes, I think it was 51 and 54 or  
20 something like that, yes, an average.

21 Q. And I think you indicated that you  
22 were, in fact, fairly satisfied with the stocking on  
23 all of these?

24 A. That's correct.

25 Q. Now, looking at Exhibit 1154 again,



1       which are our Panel 4 interrogatories, we asked again  
2       for the cost, Question 1A, and at the bottom of the  
3       first page and turning to the second, we see the cost  
4       for these treatments, Block A for site preparation,  
5       planting, tending, \$405.48 per hectare; for blocks B  
6       and C, tending only, at \$18.38 a hectare, and again  
7       these are MNR funding figures and do not include the  
8       cost of the nursery stock for Block A or the herbicides  
9       403.

10               So my calculations indicate that here to  
11       produce a difference of -- there's a difference of 12.5  
12       per cent in stock between the implanted and natural  
13       areas, but the cost for the planting was -- planted  
14       area was 22 times as much as for the naturally  
15       regenerating area. I think I'm right on that.

16               We simply take the \$405 and divide it by  
17       the \$18.38, and basically the planting was 22 times as  
18       expensive as the strip and blockcutting, and that 2200  
19       per cent difference in cost produced a difference in  
20       stocking of only 12.5 per cent.

21               So I'm asking whether, in fact, that was  
22       a cost effective treatment on block A?

23               A. Yes, it was. You are talking totally  
24       different sites, and we have already indicated that the  
25       successive seeding on those uplands clay sites is very

1 poor. It was a totally different prescription for  
2 those two sites.

3 There's also a very big difference in the  
4 rotation expected of those two sites. Rotation age on  
5 the uplands site I would expect to be somewhere between  
6 60 and 80 years, hopefully to 60. The rotation age on  
7 those black spruce low sites will be at least 120.

8 I think if you did a calculation based on  
9 present value of that - I'm not very good in math but  
10 I'm sure if you did it you would find there is quite a  
11 difference in comparison - first of all, that we can't  
12 do those kinds of treatments, seedlings, on the uplands  
13 clay site because they are very rich and because there  
14 is a lot of competition, and natural seeding is not  
15 successful.

16 Q. Even with tending, with extensive  
17 tending?

18 A. Absolutely.

19 Q. So you are saying that that was the  
20 only potential treatment that could have been done on  
21 that of site?

22 A. On the uplands site?

23 Q. Yes.

24 A. To bring it back to a crop of black  
25 spruce?

1 Q. Yes.

2 A. Yes. I would say yes in terms of  
3 black spruce. I think from a natural point of view,  
4 you would get quite a mixed crop of trees if left to  
5 natural processes.

6 Q. Now, on page 37 in the fourth  
7 paragraph, you indicate that there's a trend away from  
8 the strip and blockcuts I believe you were referring  
9 to?

10 A. Yes.

11 Q. And that's despite the fact that --  
12 my understanding is that the stocking levels you refer  
13 to in that paragraph are all within acceptable  
14 parameters; are they not?

15 A. Yes. May I answer that, the reasons  
16 for that?

17 Q. Yes.

18 A. As I showed in the slides when I was  
19 illustrating the success of those areas, my opinion is  
20 that most of the growth or the -- most of the  
21 regeneration of these blocks is advanced growth. It  
22 was there at the time of harvest. And that was the  
23 illustration I was showing in the photos where you have  
24 that advanced growth pattern, small trees going up to  
25 larger trees.

1                   There is very little seed that is leaking  
2                   up that component for that success there. And I was  
3                   also pointing out in the slides the difference between  
4                   the size of a seedling from those cuts as opposed to an  
5                   advanced growth. Quite a difference in height. That  
6                   is why we say the trend is away from that type of  
7                   harvest because we would like to maintain that advanced  
8                   growth. You have 10 to 40 years' jump on the renewal.

9                   Q. The trend is away from that type of  
10                  harvest. What kind of treatment are you now using on  
11                  those sites?

12                 A. As we pointed out in the harvest  
13                  panel, I think it was illustrated that the cutting  
14                  process is done to maintain the advanced growth. There  
15                  are the other options. There are still options  
16                  available.

17                 If the advanced growth wasn't adequate,  
18                  then there are alternatives which include the alternate  
19                  blocks or Group C or an application of black spruce  
20                  Group C2.

21                 Q. I take it you wouldn't plant on these  
22                  sites; is that right?

23                 A. The very lowest of sites for showing  
24                  off -- I indicated before there is a comparison between  
25                  the uplands, which is block A, down to the very lowest

1 of the sites, and in the middle there is the choices  
2 that you could make.

3 Q. Now, Mr. Gemmell, we asked an  
4 interrogatory with regard to road costs for these case  
5 studies, and the responses are on -- again in Exhibit  
6 1154, and at the third page, Question 1B. And we were  
7 told that with respect to really all the case study  
8 areas --

9 A. Excuse me, where are we now?

10 Q. Exhibit 1154.

11 MS. CRONK: Excuse me, Madam Chair.  
12 Sorry to interrupt my friend's cross-examination.

13 Just before we go any further with this,  
14 we've already been through this issue of road costs in  
15 cross-examination by Mr. Hanna on the access panel.  
16 There was extensive debate about it at that time.

17 I have no difficulty with my friend  
18 obviously filing any response to any interrogatory that  
19 we have provided, including this one, but these  
20 witnesses are not here to deal with road cost  
21 questions. They aren't here to deal with access  
22 questions save if they are interrelated with renewal,  
23 and I'm going to object for the kinds of reasons that  
24 were outlined on the access panel to questions in that  
25 line unless they are renewal-related. That is not why



1 these people are here.

2 MS. SWENARCHUK: They aren't exactly  
3 renewal-related. There was a statement in Panel 8 at  
4 some point about the need to consider renewal options  
5 now in road construction.

6 MS. CRONK: Sorry, I don't recall that  
7 statement. There's a discussion about what's happened  
8 with road construction, bearing in mind that roads are  
9 now used for renewal purposes.

10 Perhaps my friend can just clarify the  
11 direction and I won't have a difficulty. I just don't  
12 want to go through the debate again. It appeared on  
13 the record during the access panel between Mr. Cassidy  
14 and Mr. Hanna.

15 MADAM CHAIR: How is this question  
16 related to the issue of renewal, Ms. Swenarchuk?

17 MS. SWENARCHUK: It's related to the  
18 question of road costs for this particular renewal on  
19 this particular case study. It was not a particularly  
20 complex question.

21 MS. CRONK: Well, first of all, the  
22 answer in the interrogatory for this case study is that  
23 there were no payments for building roads that are  
24 apportioned to area treated.

25 Secondly, the issue of costing for roads

1 it seems to me has no bearing on the type of  
2 operational renewal activities about which this witness  
3 has testified, and I fail to see any connection, Madam  
4 Chair, that would in the slightest way be useful to you  
5 at all.

6 We've had the access people here,  
7 including representatives that deal with this. I don't  
8 want to belay things but I really fail to see how this  
9 is useful, or appropriate, I might add.

10 MS. SWENARCHUK: It's one brief question,  
11 Madam Chair, and that is that there has been evidence  
12 before the hearing that using strip or blockcutting  
13 increases road costs.

14 MADAM CHAIR: That was Dr. Methven's  
15 evidence?

16 MS. SWENARCHUK: That was also presented  
17 during the Ministry's case.

18 I had one brief question to Mr. Gemmell  
19 arising from the response to this interrogatory, and  
20 that is that it would appear from the response to the  
21 interrogatory that there was no increased costs for  
22 road construction for this renewal effort. That was my  
23 question.

24 MS. CRONK: I object to the question,  
25 Madam Chair. We had a panel of access witnesses here

1 who were the experts on that who knew all the details  
2 of each of the case studies with respect to access and  
3 roads issues.

4 There was cross-examination, opportunity  
5 available to my friend and her co-counsel, could have  
6 been dealt with then. This is not the man to whom this  
7 question should be put and it has nothing to do with  
8 renewal. I'm sorry, I have to formally object to the  
9 question.

10 MS. SWENARCHUK: With respect, of course,  
11 it has to do with renewal. It's a question  
12 specifically having to do with whether this particular  
13 approach to renewal increased the road cost. If  
14 Mr. Gemmell does not have the information to respond to  
15 the question, he can simply tell us that.

16 The Board will recall that during  
17 previous panels in the Ministry case, there was a  
18 recognition by the parties to the hearing that these  
19 issues are all inter-related, that the emphasis on each  
20 panel should be, of course, on the issue that was  
21 squarely on that panel but that there would be some  
22 inter-relationship of questions between panels.

23 I have one question to put on this issue,  
24 it has to do with road costing for this specific  
25 renewal treatment, and, in my submission, the question

1 is entirely proper.

2 MADAM CHAIR: Mr. Gemmell, you don't have  
3 any expertise in roads?

4 MR. GEMMELL: Well, yes, I do.

5 MS. CRONK: That wasn't the basis of  
6 the -- to move this along --

7 MADAM CHAIR: Let's not get bogged down  
8 in this.

9 What's the question, Ms. Swenarchuk? You  
10 could have asked it earlier but --

11 MS. SWENARCHUK: I agree. In my  
12 estimation it was entirely proper to raise it in this  
13 in Panel as well for the reasons that I've just  
14 explained.

15 MADAM CHAIR: Just pose the question.

16 MS. SWENARCHUK: Q. The question is: Is  
17 it correct to assume from this response that the use of  
18 the block and stripcuts in this area did not result in  
19 increased road costs?

20 MR. GEMMELL: A. This area was  
21 relatively small, close to a main road. The roads were  
22 all winter roads, therefore, the cost wasn't a great  
23 cost. If this was a program that was extensive to our  
24 area there would definitely be increased road costs to  
25 carry out this kind of treatment.

1 Q. But for this one, you weren't --

2 A. It's a relatively small area. Yes,  
3 there were additional road costs because we had to go  
4 back and open up the road again to cut the wood a  
5 second time. But on a very small scale, it doesn't  
6 mean a great deal in our camp operation. If it were a  
7 normal method of harvesting throughout our camp area,  
8 then the cost would be significantly more.

9 MS. SWENARCHUK: What is our schedule for  
10 breaks this afternoon?

11 MADAM CHAIR: Yes, we'll take a break now  
12 until three.

13 ---Recess at 2:48 p.m.

14 ----On resuming at 3:05 p.m.:

15 MADAM CHAIR: Please be seated.

16 MS. SWENARCHUK: Q. Mr. Waddell, I  
17 believe you testified yesterday to differences between,  
18 or concerns that the Industry has with regard to  
19 regeneration on Crown management units. And looking at  
20 page 30 now of the Panel 8 witness statement, and just  
21 to summarize: The indication on that page is that FMA  
22 lands now constitute 45 per cent of the productive  
23 forest land, which presumably means that  
24 nontreatable-FMA lands, Crown management units and  
25 company management units constitute 55 per cent of the



1 productive forest lands. Is that not correct?

2 MR. WADDELL: A. I would think so.

3 Q. And in your chart on page 72 taken  
4 from the FMA Task Force Report, we see the difference  
5 between the level of regeneration efforts on FMA lands  
6 as opposed to nontreatable-FMA lands.

7 Now, if you look at page -- section --

8 MR. FREIDIN: On what page and what  
9 document is that last reference?

10 MS. SWENARCHUK: Page 72 of this  
11 document.

12 MR. FREIDIN: Page 72 of?

13 MS. SWENARCHUK: Panel 8 witness  
14 statement.

15 Q. Now, if we look at Section 4, if I  
16 can find it, of your witness statement, with regard to  
17 renewal activities on Crown management units, I think  
18 the point of that chapter could perhaps be taken from  
19 the line on page 43 indicating that the Industry is of  
20 the strong belief that CMU lands must be managed to the  
21 same standards as the FMA lands if meaningful short or  
22 long-term renewal timber resource is to be achieved.

23 Now, are you aware of the standard  
24 established in the Crown Timber Act for the management  
25 of lands under forest management agreements, the

1       sustained yield requirement in the Act?

2                   MR. WADDELL:  A.  Possibly you could  
3       refresh my memory.

4                   MS. SWENARCHUK:  I know the Board has  
5       access to this, but I think it might be useful to  
6       provide copies.

7                   MADAM CHAIR:  What is it that we are  
8       looking at, Ms. Swenarchuk, excerpts from the Crown  
9       Timber Act?

10                  MS. SWENARCHUK:  Yes, this is an excerpt  
11       from the Crown Timber Act.  I'm just providing it for  
12       convenience really.  But Section 6 which we see on the  
13       first page provides the Ministry with authority to  
14       enter into a forest management agreement, and Section  
15       6-1 indicates:

16                   "The Ministry may enter into an  
17       agreement with any person for the  
18       management of Crown timber on a sustained  
19       yield basis."

20                  And then on the following page of the  
21       excerpt which is page 12 of this publication,  
22       subsection 2, the fourth paragraph on that page  
23       indicates that:

24                   "The expression sustained yield means  
25       the growth of timber in the forest can

1 produce and it can be cut to achieve the  
2 continuous approximate balance between  
3 growth of timber and timber cut."

4 Now, do you understand that to be the  
5 standards to which the FMA lands are being managed,  
6 Mr. Waddell?

7 MS. CRONK: I'm sorry, Madam Chair, I  
8 object again. I have no objection at all if Ms.  
9 Swenarchuk wants to ask the witnesses their  
10 understanding based on their experience and their area  
11 of operations on various relevant concepts to forestry,  
12 but I object to these witnesses being cross-examined on  
13 interpretation of statutory provisions or their  
14 understanding of terms that are clearly terms of  
15 argument or statute.

16 They have not been -- they are not in  
17 fact nor have they legally been qualified before you to  
18 do that and it's never -- it's inappropriate, in my  
19 respectful submission, that witnesses be cross-examined  
20 on points of statutes unless it's based on their  
21 personal experience with operating and understanding  
22 the particular terms.

23 On the basis framed, I object to the  
24 question.

25 MS. SWENARCHUK: We can tie this all

1 together by looking at page 25 of the Panel 8 witness  
2 statement in which the witnesses quote from the stated  
3 purpose of the agreements, forest management  
4 agreements. And the second last line on the page  
5 indicate that:

6 "These agreements are to ensure that  
7 the forest on such lands are harvested  
8 and regenerated to produce successful  
9 crops on a sustained yield basis."

10 Perhaps, then I should ask you, Mr.  
11 Waddell, what your understanding is of the sustained  
12 yield basis in that paragraph in the witness statement.

13 And I just indicate, Madam Chair, it's  
14 not so particularly that I want to cross-examine the  
15 witness on the meaning of sustained yield in the Crown  
16 Timber Act, but rather arising from the issue that the  
17 Industry has raised with regard to Crown management  
18 units to contrast that duty in the Act with what the  
19 Ministry considers the standard to be on Crown  
20 management units, and I was about to come to that.

21 And perhaps we could just leave the  
22 sustained yield question and come to the differential  
23 definition that applies to Crown management units and  
24 if -- Madam Chair, Mr. Martel and witnesses -- if you  
25 would choose to look at the timber management planning

1 manual at page 171, the definition is there.

2 MADAM CHAIR: The definition of what, Ms.  
3 Swenarchuk?

4 MS. SWENARCHUK: I'll just read it for  
5 the record. There is a definition, first of all, of  
6 management unit.

7 MADAM CHAIR: What page is that?

8 MS. SWENARCHUK: Exhibit 171 of the Crown  
9 Timber Act - excuse me - of the Timber Planning  
10 management Manual which is Exhibit 7.

11 MS. CRONK: The problem I'm having,  
12 Madam Chair, is we have a list of exhibits from  
13 Ms. Swenarchuk that these witness were going to need  
14 -and that we would need to have here today. This wasn't  
15 on it. I don't have it here. The witnesses I don't  
16 believe have it, they can correct me if I'm wrong.  
17 Maybe my friend could just help me by reading into the  
18 record the sections, at least I'll know what she is  
19 talking about.

20 MS. SWENARCHUK: That was exactly my  
21 intent, and I didn't put it on the list because I'm  
22 only dealing with a two-line definition, which I think  
23 actually counsel all focus on the problem that the  
24 Industry has.

25 Do you have this manual?



1 MR. FREIDIN: They didn't say they had a  
2 problem.

3 MS. SWENARCHUK: Mr. Waddell, do you have  
4 the manual?

5 MR. WADDELL: I have the manual.

6 MADAM CHAIR: Ms. Swenarchuk, before you  
7 give the definition, could you just tell the Board  
8 where the question is going to?

9 MS. SWENARCHUK: The Industry has  
10 identified in the witness statement its concern with  
11 the level of renewal operations on Crown management  
12 units.

13 If we look at the definition of Crown  
14 management units as the Ministry has defined them, it  
15 appears to me that the definition is clearly different  
16 from four sets of different standards for management  
17 than the standard that is set in the statute for the  
18 management of forest management lands, forest  
19 management agreement lands, and that is the issue I  
20 wanted to explore with Mr. Waddell.

21 In other words, I think we may have quite  
22 a fundamental problem here with regard to whether we  
23 can expect the Ministry to commence management to the  
24 same standard when, by their own definition, Crown  
25 management units -- and we'll read it again:

1                   "Formed from unlicenced Crown lands and  
2                   licenced areas are too small to permit  
3                   sustained yield operations."

4                   MR. WADDELL: Where are you reading that  
5                   from, please?

6                   MS. SWENARCHUK: We have, first of all,  
7                   the definition of sustained yield under the Crown  
8                   Timber Act as it applies FMAs.

9                   Q. Now, Mr. Waddell --

10                  MS. CRONK: I'm sorry.

11                  MS. SWENARCHUK: Believe it or not, I'm  
12                  attempting to be of assistance to the Ministry with  
13                  this line of questioning.

14                  MS. CRONK: Before you put your question  
15                  of assistance or otherwise, may I just make two points,  
16                  Madam Chair.

17                  First, it is not the evidence before you  
18                  from this Panel that the Industry has a problem with  
19                  the management of Crown management units. That is not  
20                  my view of the evidence you've heard. You have heard  
21                  evidence they are concerned that they be managed with  
22                  the same standards. That is not necessarily the same  
23                  thing.

24                  Secondly, I have no difficulty again with  
25                  my friend putting any questions to these witnesses

1 based on their own personal experience or operation or  
2 understanding.

3 I do have a problem if she is going to --  
4 through questions and answers, try to engage in a form  
5 of legal argument, and if she thinks there is a  
6 difficulty legally because of a statutory definition  
7 with management to a particular set of standards, that  
8 is a matter for her to argue before you at the  
9 appropriate time.

10 So I say only that as a prelude. I  
11 will object to the Board until I hear the specific  
12 questions, and there may be no cause to object, but I  
13 do make those two points.

14 MS. SWENARCHUK: Q. Mr. Waddell, now  
15 looking on page 171 of the Timber Planning management  
16 Manual at the definition of management unit, and  
17 specifically at the definition of Crown management  
18 units:

19 "Formed from unlicensed Crown lands and  
20 licensed areas too small to permit  
21 sustained yield operations."

22 Now, that suggests to me, Mr. Waddell,  
23 that it is the Ministry's view that these lands, as  
24 they say, are too small to permit sustained yield  
25 operations and that therefore, although the Industry

1 has a concern that these lands be managed in the same  
2 standard as the FMA lands, that the Ministry considers  
3 really that it's not possible, that these are lands  
4 which can't be managed at a level of sustained yield  
5 operation?

6 MR. WADDELL: A. Are you asking me to  
7 interpret what the Ministry thinks about Crown  
8 management units?

9 Q. Is that not what appears from the  
10 definition, Mr. Waddell?

11 A. Well --

12 Q. Let me put the question this way: Is  
13 the Industry witness statement suggesting that this  
14 standard, as defined by the Ministry through Crown  
15 management units, needs to be changed?

16 MS. CRONK: What standard?

17 MS. SWENARCHUK: The standard of not  
18 managing on the sustained yield basis.

19 MR. FREIDIN: That presupposes, does it  
20 not, managed on a sustained yield basis and the witness  
21 already did not acknowledge that?

22 MR. WADDELL: I'm sorry. I've lost  
23 track.

24 MADAM CHAIR: I think I've come to a  
25 standstill here, Ms. Swenarchuk. The evidence that the

1 Board remembers with respect specifically to CMUs being  
2 managed to some renewal standards similar to FMA -- I  
3 think it was Mr. Murray's evidence with respect to the  
4 dependence of sawmills in the Great Lakes/St. Lawrence  
5 Forest on timber provided by CMUs.

6 Perhaps we could put some practical  
7 questions to him, but I don't think that's what you are  
8 getting at. What you are getting at is that you are  
9 trying to tell the Board that the Industry is going to  
10 need some sort of a change in the definition of terms  
11 and legislation policy to accommodate that sort of  
12 thing. I don't think Mr. Waddell can answer that  
13 question.

14 MS. SWENARCHUK: What I'm suggesting to  
15 do, Mr. Waddell, is quite a fundamental problem here.  
16 The difference in approach to management of these units  
17 between what the Ministry definition suggests and what  
18 the Industry, in my view, is advocating in its witness  
19 statement.

20 MADAM CHAIR: That's fine.

21 MR. FREIDIN: I don't think Mr. Waddell  
22 is the person is charged with the responsibility of  
23 sorting that out. He's simply saying they relied to a  
24 certain extent on timber from CMU. The Board expects  
25 him to answer and develop a strategy as to how that



1 would be changed. I don't know where we can go with  
2 this question.

3 MR. WADDELL: May I be permitted to --

4 MS. SWENARCHUK: Jump in.

5 MR. WADDELL: Our reading of the  
6 definition of this is different than yours, Ms.  
7 Swenarchuk. We read it as "Crown management units  
8 formed from unlicenced Crown lands" -- and you could  
9 stop right there but then it says, "and licenced area  
10 too small to permit sustained yield operations."

11 And we relate that "area too small to  
12 permit sustained yield operation" as being a number of  
13 small licences within the overall Crown management unit  
14 itself. But the Crown management unit is -- from my  
15 days in working with the Ministry of Natural Resources,  
16 we always considered that they were self-supporting  
17 units and they were on a sustained basis -- managed on  
18 a sustained basis, the allowable cut calculation the  
19 same as a company management unit.

20 MR. FREIDIN: That was the evidence of  
21 Dr. Osborne in Panel 3 of the Ministry's case and there  
22 was cross-examination on that by this party as well.

23 MR. WADDELL: Having said that, it's  
24 still our evidence we wanted to see those units managed  
25 at the same standards at the FMAs, and I can't speak to

1 whether they are or are not --

2 MS. SWENARCHUK: Is it your view they are  
3 not managed at this time by the --

4 MR. WADDELL: I have no access to figures  
5 on Crown management units, Ms. Swenarchuk.

6 MS. SWENARCHUK: Q. Does your Chapter 4  
7 in your witness statement and your advocacy of the same  
8 standards of management, on the same units on the Crown  
9 management units as on FMAs, does this reflect a  
10 concern on your part with regard to management on these  
11 units at this time?

12 MR. WADDELL: A. Again, I would ask you  
13 to repeat the question, please.

14 Q. You've indicated in Section 4 of your  
15 witness statement the degree to which wood supply from  
16 these units is important to FMA holders?

17 A. Yes.

18 Q. And you advocated that Crown  
19 management lands be managed to the same standards as  
20 forest management agreement areas?

21 A. Yes.

22 Q. Is the Industry concerned that that  
23 is not occurring at this time?

24 A. Yes, I think we are concerned in the  
25 sense that we don't know. For example, until recently

1 the Crown management units were not under the same  
2 timber management planning process as were the FMAs, so  
3 in that sense they may or may not have been managed to  
4 the same standard.

5 They are under the same management  
6 planning requirements now as the FMAs are, but, yes, we  
7 are concerned because of the importance of the Crown  
8 management units in the overall fibre supply picture  
9 for Ontario, but we really do not know to what standard  
10 they are being managed and that is the reason for our  
11 concern.

12 Q. In that response you are responding  
13 for the OFIA/OLMA, are you, and not simply for your own  
14 company; is that correct?

15 A. I was responding on behalf of  
16 OFIA/OLMA, yes, but I can add a similar note on behalf  
17 of our own company: We do not know how the surrounding  
18 Crown management units -- to what level they are being  
19 managed.

20 Q. There is another type of management  
21 unit in the province, is there not, Mr. Waddell? There  
22 are company management units as well?

23 A. Yes, there are.

24 Q. And is it your view that they also  
25 should be managed to the same standard as Crown

1 management units and FMA areas?

2 A. Yes, they should.

3 Q. To your knowledge, are there any  
4 management unit standards at this time?

5 A. Again, I'm sorry, I have no  
6 involvement with company management - with company -  
7 what you do call it, company management units?

8 Q. Yes.

9 A. Yes, I have no personal knowledge of  
10 company management units. There are none within our  
11 area, northeastern Ontario, that I'm aware of.

12 Q. Does any other witness have an  
13 opinion on this question?

14 MR. MURRAY: A. Ms. Swenarchuk, yes.  
15 The Algonquin Forestry Authority are operating under a  
16 company management unit. I did deal with them in my  
17 capacity as manager in the Huntsville Mill of Weldwood  
18 of Canada.

19 I have been in touch with the people  
20 there and talked to them about forestry matters, and it  
21 is my opinion that they are being managed to a level of  
22 the FMA.

23 The difference, as you know, is that  
24 renewal is the responsibility of the Ministry on a  
25 company management unit, but in the Algonquin Forestry

1 Authority they operate on a forest management -- not  
2 agreement -- regeneration agreement to fulfil the  
3 regeneration requirements.

4 Q. Given that that is a unique entity  
5 that operates only in Algonquin Park, do you have any  
6 information about company management units other than  
7 that one?

8 A. No, I don't.

9 Q. Could we turn now, Mr. Waddell, to  
10 page 56 of the witness statement and following, and  
11 here you are discussing factors that influence the  
12 choice of renewal options.

13 MR. WADDELL: A. Ms. Swenarchuk, I can  
14 try to answer that question if you wish, but this was  
15 not my section.

16 Q. Whose section was it?

17 A. Mr. Squires.

18 Q. Mr. Squires?

19 MR. SQUIRES: A. Yes.

20 Q. Now, turning to page 57, Mr. Squires,  
21 and item 8 in regard to the silvicultural system and  
22 harvesting method, you've indicated starting at about  
23 the fifth line of that section that:

24 "For example, when natural regeneration  
25 is the objective, modified cutting



1 systems are sometimes employed. In these  
2 circumstances, harvesting to preserve  
3 advanced growth can enhance natural  
4 regeneration as, for example, in black  
5 spruce."

6 Now, would not harvesting in block and  
7 stripcuts be a method as well of integrating harvesting  
8 renewal and fostering natural regeneration in certain  
9 areas?

10 A. You are asking me about block and  
11 stripcuts relative to modified cutting system?

12 Q. Yes.

13 A. Which it is a part of --

14 Q. Yes, I notice that the use of block  
15 or stripcuts is not identified as the type of modified  
16 harvest system, and I'm just suggesting to you or  
17 requesting: Would you agree that that is also a  
18 silvicultural method that can be used to enhance  
19 natural regeneration on some sites?

20 A. On the correct site, yes.

21 Q. And further in the same paragraph, we  
22 see that this is about eight lines from the bottom:

23 "Full-tree logging reduces the amount  
24 of slash left on-site after harvesting  
25 and hence may permit a less intensive

1 method of mechanical site preparation."

2 Does it not, however, also reduce the  
3 amount of natural seed available to regenerate the  
4 area?

5 A. Could you rephrase that question,  
6 please? I was trying to read with you.

7 Q. Have you had a chance to read the  
8 sentence on full-tree logging?

9 A. "Full-tree logging reduces the amount  
10 of slash left on-site after harvesting  
11 and hence may permit a less intensive  
12 method of mechanical site preparation."  
13 That is the sentence?

14 A. Yes.

15 Q. Yes. And my question is: Is it not  
16 also the case, however, that full-tree logging can make  
17 natural regeneration less possible by removing seed  
18 from site?

19 A. I would think on some sites what you  
20 would get is that you would get some pluses and some  
21 minuses; that -- let's take a black spruce lowland site  
22 condition where you -- as already has been stated by  
23 Mr. Gemmell. If you were to leave the logging slash  
24 on-site with the cones, the slash itself may be an  
25 impediment to the regeneration.

1                   On the other hand, if you take it off you  
2                   can have a larger area of seedbed and seed coming on to  
3                   the site and can then be of higher benefit relative to  
4                   the slash being there. It would have more seedbed  
5                   available and a smaller number of seed would have the  
6                   same stocking.

7                   Q. Would you agree this would vary from  
8                   site to site, whether the effect of removing the seed  
9                   which is - is removed when the slash is removed - is  
10                  positive or negative with regard to providing seed  
11                  sites for regeneration?

12                  A. On a jack pine site where, in our  
13                  experience, it's difficult to get reliable natural  
14                  regeneration of jack pine, I think you would have to do  
15                  site preparation.

16                  In that case, the absence of the logging  
17                  slash becomes an advantage. The additional application  
18                  of seed to reduce your risk for regeneration becomes,  
19                  in my opinion, an improvement.

20                  Maybe I didn't quite answer your  
21                  question. That seed is removed from the site, but it  
22                  may have been, probably would have been, to little  
23                  advantage in my experience, due to need to site  
24                  preparation and additional application of seed to  
25                  reduce the risk of failure for jack pine.

1 Q. What about black spruce?

2 A. On that same jack pine site? I  
3 wouldn't look to black spruce.

4 Q. And uplands black?

5 A. In an uplands black spruce site?

6 Q. Right.

7 A. I would think that it would be  
8 similar to lowland sites in the sense that the slash  
9 still impediment to the natural regeneration of black  
10 spruce and very little regeneration comes from seed in  
11 the slash. The regeneration -- natural regeneration of  
12 black spruce tends to come from seeds coming on to the  
13 cut-over area.

14 Q. Mr. Squires, do you have any  
15 information about whether site preparation and planting  
16 activities have occurred in provinces other than  
17 Ontario?

18 A. Whether or not they have occurred?

19 Q. During the 1980s, whether they have  
20 increased.

21 MS. CRONK: Sorry?

22 MR. SQUIRES: Yes.

23 MS. CRONK: Excuse me. Go ahead.

24 MR. SQUIRES: I have experience in the  
25 Province of Newfoundland, yes, it has increased on

1 their own company timber limits, licences.

2 MR. FREIDIN: I'm sorry, Madam Chair, I  
3 missed the first part of the question. I'm not sure  
4 what it is that they are talking about that has  
5 increased, and perhaps I can clarify it for my benefit.

6 MS. SWENARCHUK: My question is whether  
7 the witness has information as to whether site  
8 preparation and planting efforts have increased in  
9 other provinces of Canada besides Ontario.

10 MR. FREIDIN: Thank you.

11 MS. SWENARCHUK: And Mr. Squires is  
12 saying that to his knowledge that is true in company  
13 limits in Newfoundland.

14 Q. Would you agree with me if I put to  
15 you a proposition that it has increased considerably in  
16 all provinces during the '80s?

17 MS. CRONK: I'm sorry, I object, Madam  
18 Chair. There is nothing before you to suggest that  
19 these witnesses are qualified to answer that question.

20 Ms. Swenarchuk is going to have an  
21 opportunity to lead her own case and her own witnesses  
22 and if she has someone who is an expert across Canada  
23 on these practices, she can lead that evidence directly  
24 before the Board.

25 I'm not aware that these witnesses have



1 background sufficient in a cumulative sense. Some of  
2 them do have experience in individual other provinces  
3 but they are not cross-jurisdictional people and they  
4 are not before you in that way.

5 MS. SWENARCHUK: Madam Chair and Mr.  
6 Martel, these witnesses are senior managers in the  
7 industry that is extremely prominent across the  
8 country. If they do not have the information in which  
9 to respond to the question, I'll leave the question  
10 there.

11 My assumption would be based on some such  
12 things as professional memberships in national  
13 organizations, et cetera, that they would have this  
14 type of information. If they don't, we'll leave the  
15 question. I don't consider the question improper and I  
16 think it would be of assistance to the Board if the  
17 matter could be identified.

18 MS. CRONK: I'm sorry. The question is,  
19 is it on the rise across Canada? In what province, in  
20 what respect, in what activity? Sure, I expect that  
21 each of these witnesses could offer an opinion on it so  
22 could everyone in the room.

23 I just don't think it's going to be  
24 terribly useful to the Board unless their opinion is  
25 grounded in some personal, professional experience or

1 some personal knowledge. In my respectful suggestion  
2 to you, it's not at all an appropriate line of  
3 questioning.

4 MS. SWENARCHUK: I can provide a  
5 publication which suggests details and the witnesses  
6 could indicate whether they have the information to  
7 agree with the publication or not.

8 MADAM CHAIR: Then we would have to take  
9 a break, Ms. Swenarchuk. They haven't seen it, have  
10 they?

11 The Board doesn't know how useful that  
12 kind of a survey of these witnesses is going to be to  
13 us.

14 MS. SWENARCHUK: Madam Chair, I think the  
15 usefulness is in identifying the -- in assisting in  
16 identifying the reasons for the increased regeneration  
17 activities in Ontario, and it would be our evidence,  
18 and I think it would be useful to do it now -- if Ms.  
19 Cronk insists we'll wait until our own case -- that in  
20 fact funding resources for regeneration efforts have  
21 increased nationally in the '80s and that that is a  
22 beneficial -- that has had a beneficial effect on  
23 regeneration efforts in Ontario as in our provinces.  
24 If these witnesses aren't in a position to confirm  
25 that, we can leave it for a later time.

1                   MADAM CHAIR: Do any of the witnesses  
2                   want to tackle this question? Do you know something  
3                   about the funding provided in other jurisdictions in  
4                   Canada and do you have personal experience with  
5                   planting and all other types of regeneration that may  
6                   or may not be on the increase in other jurisdictions?

7                   MR. GEMMELL: (Nodding negatively)

8                   MR. FERGUSON: (Nodding negatively)

9                   MR. NICKS: (Nodding negatively)

10                  MR. MURRAY: (Nodding negatively)

11                  MR. WADDELL: (Nodding negatively)

12                  MR. SQUIRES: (Nodding negatively)

13                  MADAM CHAIR: No. I guess you are not  
14                  going to get an answer, Ms. Swenarchuk.

15                  Ms. Swenarchuk, sorry to interrupt your  
16                  cross-examination, but Mr. Martel and I are wilting  
17                  fast up here. I don't know how everyone else is doing.

18                  Did you think you are going to be  
19                  finished today? You don't to have tell me to the  
20                  minute but --

21                  MS. SWENARCHUK: That turn of events may  
22                  shorten my cross-examination considerably. It would  
23                  take some reorganization to do that and I obviously  
24                  can't answer the question.

25                  MADAM CHAIR: When you are ready for a

1 break -- we are going to need another break before  
2 5:00. When you are ready please let the Board know.

3 MS. SWENARCHUK: I'm wilting, too. It's  
4 very warm.

5 MADAM CHAIR: Would you like to take a  
6 10-minute break now or would you prefer to wait until  
7 four? I don't want to interrupt what you are doing.

8 MS. SWENARCHUK: Yes, we'll take a break.

9 MADAM CHAIR: Ten minutes. All right.  
10 Thank you.

11 ---Recess at 3:45 p.m.

12 ---On resuming at 4:07 p.m.:

13 MADAM CHAIR: Please be seated.

14 Ms. Swenarchuk?

15 MS. SWENARCHUK: Q. Mr. Waddell, would  
16 you please turn to Exhibit 940, which is the report of  
17 the task force of forest management agreements. You  
18 were a member of that task force, I understand; is that  
19 correct?

20 MR. WADDELL: A. Yes, I was.

21 Q. And did you participate in the  
22 writing of this report?

23 A. I participated in the input into the  
24 writing, not the actual writing.

25 Q. Are you familiar with the contents?

1 A. I believe so.

2 Q. And did the contents reflect your  
3 opinions fairly or are there elements of it that you  
4 don't agree with?

5 A. There are no essential elements with  
6 which I do not agree. There are some minor variations,  
7 but there are no essential elements.

8 Q. Could we turn to page 24 then,  
9 please, with regard to the impacts of FMAs on Crown  
10 management units.

11 A. Sorry. Did you say page 24?

12 Q. 24.

13 A. I have it.

14 Q. Now, the third paragraph on the page  
15 begins the discussion of some of the problems as  
16 between CMUs and FMAs. It is obvious that MNR takes  
17 its FMA contractual obligation seriously:

18 "FMA has received preferential  
19 treatment over the Crown units with  
20 regard to funding, stock allocations and  
21 protection from end year spending cut  
22 backs. Several districts reported  
23 serious disparities in farming in recent  
24 years between FMA and for important Crown  
25 management units."



1                   Figure 6, which is the following page,  
2                   illustrates the distribution of funding relative to the  
3                   harvest from FMA and other Crown land in northern  
4                   Ontario:

5                   "While there appears to be a balance in  
6                   funding distribution up to 1986/87 on a  
7                   provincial basis, certain regions,  
8                   northwest region, reported imbalance  
9                   in their funding distribution."

10                  Then if we look at Figure 6 on the  
11                  following page, we see the trend as regards to harvest  
12                  and silvics on the FMA and non-FMA lands.

13                  I don't intend to go through them in  
14                  detail, but then if we turn to page 25 we see a problem  
15                  identified:

16                  "The distribution of silvicultural  
17                  funding since 1986/87 and the failure to  
18                  obtain or continue funding to Crown roads  
19                  has resulted in inadequate forest  
20                  management on Crown units."

21                  And they say,

22                  "This is a major problem area with the  
23                  deep seated cause lying in MNR  
24                  budgeting and priority setting process.  
25                  The FMA's budget request for silviculture

1 are usually fully funded while Crown  
2 units budget on a diminishing base  
3 usually 80 to 90 per cent of the previous  
4 years levels."

5 Now, are those problems that you had in  
6 mind when preparing the section of the Panel 8 witness  
7 statement that discusses the need for silvicultural  
8 management on Crown management units?

9 A. Can you ask me that question in a  
10 different manner so I understand what you mean, please?

11 Q. Well, you were part of the task force  
12 that looked at these questions and you said you don't  
13 substantially disagree with anything in the report, if  
14 I'm paraphrasing you correctly. I don't mean to be  
15 misleading.

16 A. Correct.

17 Q. So this is a problem that was  
18 identified in the report. And do you agree that this  
19 is a problem?

20 A. I can't say that it is a problem as  
21 of 1990. It was a problem that was identified to us in  
22 the summer of 1987 when I was on the FMA task force and  
23 we heard presentations from different Ministry and  
24 company people across the province.

25 Q. And have you had any information

1 since 1987 that would add to our knowledge of this  
2 problem as it's described in this report?

3 A. No, I've had no information as such  
4 that would give us any further insight into what we  
5 prepared at that time.

6 Q. Did the Industry prepare a written  
7 reply to this report when it was -- after it was --

8 A. No, we did not.

9 Q. Now, would you turn back to page 12  
10 in this report, Mr. Waddell, and I'm looking at Section  
11 3.1.1.2, the nursery stock cap and the last paragraph  
12 of the page which reads as follows:

13 "The cap on stock production was placed  
14 there by MNR in an effort to bring the  
15 Ministry ratio of planting and other  
16 treatments into a better balance. At one  
17 point, the regeneration program seemed to  
18 be driven by a mushrooming production  
19 of container stock."

20 Do you agree with that statement?

21 A. Yes.

22 Q. Now, the Industry has indicated in  
23 the witness statement a considerable concern about  
24 levels of funding for silviculture in Ontario in the  
25 FMA system.

1                   Do you agree with me, Mr. Waddell, that  
2       issues related to funding were raised in this task  
3       force report as well? For example, on page 11 with  
4       regard to road revenues, that is in the last paragraph;  
5       on page 13 in the second significant paragraph,  
6       "funding must flow accordingly", and that is in  
7       relation to the seedling cap.

8                   A. I'm sorry. I've lost where --

9                   Q. Let me be more clear about this. The  
10      second full paragraph says --

11                  A. On page 13?

12                  Q. Yes.

13                  Calling for a re-examination of the  
14      rationale for the cap on stock production.

15                  "If the outcome of this re-examination  
16               indicates higher stock levels are in  
17               order then funding must go accordingly  
18               both to stop production and to associated  
19               areas of silviculture."

20                  And then there was concern also expressed  
21      on that page and on the next page with silviculture  
22      costs, and the problem as identified on that page is  
23      that:

24                  "On many FMAs, treatment rates are  
25               insufficient to pay for actual company

1 costs of treatment and cost overruns are  
2 no longer offset by compensation payments  
3 for road construction."

4 And then there was a recommendation that  
5 the MNR and agreement holders arrive at a more  
6 equitable basis for the setting of treatment rates. Do  
7 you agree with that recommendation?

8 A. Yes, I do.

9 Q. And to your knowledge has any action  
10 flowed from that recommendation to date?

11 A. I believe the negotiating of  
12 silvicultural levels of funding is still done in the  
13 same manner as it was when we prepared this.

14 Q. Do you still have a concern that MNR  
15 and FMA holders arrive at a more equitable basis for  
16 setting rates?

17 A. Yes, I do.

18 Q. And then on page 16 of the report  
19 there is a problem identified essentially that the  
20 inflation factor applied to the treatment rates in the  
21 agreements was not high enough and that the adjustment  
22 factor -- the recommendation being that:

23 "The adjustment factor for inflation  
24 reflect the rate of inflation within the  
25 forestry economic sector....as it relates



1 to fuel, equipment and labour."

2 Does that remain an outstanding concern  
3 in your mind?

4 A. Yes, in some areas more than others,  
5 as a general statement, yes.

6 Q. Could you explain what you mean by  
7 that, please?

8 A. Well, for instance, on the site  
9 preparation rates, probably 80 percent of your site  
10 preparation rate or the cost is the equipment cost and  
11 the fuel cost. The only other component in there  
12 basically is labour. And when you start out, for  
13 example, in 1985 and if you have negotiated a rate that  
14 is an equitable rate in 1985, that rate remains the  
15 same except for the inflation factor until 1990 when  
16 you have an opportunity to renegotiate it.

17 Now, if at the end of year one the real  
18 inflation factor on fuel, equipment and labour, which  
19 are your three major components that go into site  
20 preparation equipment -- and that is where much of our  
21 money is spent on-site preparation equipment -- if  
22 those three major components, for example, go up by 12  
23 to 15 per cent as they have in many years and even  
24 more, and the average GNE price index used by the  
25 Ministry to apply our inflation rate is only 3.5 or 4

1 per cent, then we have fallen behind 10 percent in the  
2 first year. And each year thereafter for the full  
3 five-year period, if the same process occurs, by the  
4 time we get to the end of the five-year period our  
5 funding level from the Ministry is significantly below  
6 what it would have been and what our inflated costs  
7 have been due to those three major components of fuel  
8 equipment and labour.

9 Q. And does your concern on this issue  
10 extend to today even though you have just been involved  
11 in drafting the new FMA? Has that concern been dealt  
12 with in this drafting?

13 A. The concern over the inflation rate  
14 has not been -- not changed.

15 Q. So in summary would you agree with me  
16 that amongst the other -- amongst the many issues that  
17 the task force dealt with were issues of cost and that  
18 there were a number of areas in which the FMA holders  
19 were not satisfied with the level of funding that were  
20 obtained?

21 A. Would you repeat the question?

22 Q. Just that in summary the task force  
23 report identifies a number of areas in which FMA  
24 holders have concerns about the level of funding they  
25 were receiving?

1                   A. Yes. If I may add, however, there  
2 were two Ministry of Natural Resources people on this  
3 task force and one was the chairman and the other was  
4 the principal author of this document, and they also  
5 shared these concerns.

6                   It was not just the Industry  
7 participants. These feelings expressed in this task  
8 force report represented certainly the feelings of the  
9 two Ministry people that were on the task force as  
10 well.

11                  MR. MARTEL: Could I ask a question then?

12                  What was their concern or did they  
13 express a concern on the fact that the amount allocated  
14 to MNR itself was being further eroded by only getting  
15 a portion of what they received in the previous year?  
16 Did those members express any concern to you about what  
17 was happening as a result of this to MNR efforts?

18                  A. Yes. The Ministry members of this  
19 task force were concerned about the apparent declining  
20 level of funding on Crown management units. Does that  
21 answer your question, sir?

22                  MR. MARTEL: Yes. Thank you.

23                  MS. SWENARCHUK: Q. Now, the final  
24 chapters of your report to your witness statement,  
25 Mr. Waddell, I think document very clearly for the

1 Board the Industry's concerns about funding, about the  
2 cap on nursery stock, and, if you look at pages 150 and  
3 151, the impact on renewal activities of the inadequate  
4 funds.

5 And what I take from those pages is, as  
6 you have identified, are reductions in renewal  
7 activities that would have otherwise occurred. You  
8 have given us those figures. Agreed?

9 MR. WADDELL: A. I'm sorry. Someone  
10 coughed just in the crucial word there and I missed  
11 that again, too.

12 Q. The final chapters of the witness  
13 statement, Mr. Waddell, express the Industry's concern  
14 about funding levels, does it not, and indicate that  
15 reduced funding can result in reduced renewal activity?

16 A. It can in the long run.

17 Q. And you have given examples on Pages  
18 150 and 151 of some of those reductions?

19 A. Yes, the reductions in '89/90 fiscal  
20 year.

21 Q. Right.

22 Now, the Industry has emphasized in  
23 discussions of a proposed new timber production policy,  
24 that coming with it should be essentially guaranteed  
25 funding for the renewal efforts for established funding

1 for the renewal efforts for the future; is that not  
2 correct?

3 A. I would not necessarily agree with  
4 your word "guarantee". I don't think there is anything  
5 guaranteed in this world, especially funding.

6 Q. Well, on page 158 at the bottom --

7 A. Excuse me, 158?

8 Q. Yes.

9 A. Yes, I think that says, "Assurance of  
10 adequate and continuous renewal funding."

11 Q. Yes.

12 Now, isn't it true, Mr. Waddell, as Mr.  
13 Martel indicated yesterday, that funding for any  
14 particular government activity is always in competition  
15 with other demands and that it's not possible for any  
16 of us to expect our particular priorities to be funded  
17 in a guaranteed way in the future?

18 A. Not on a year-to-year basis, I  
19 suppose.

20 Q. And isn't that particularly  
21 problematic when we are talking about an activity like  
22 forest renewal which occurs over long time periods and  
23 on which the results are not evident for decades in the  
24 future?

25 A. I wouldn't agree with your statement



1 that the results are not evident for decades in the  
2 future.

3 Q. The returns perhaps?

4 A. Pardon me?

5 Q. The returns.

6 A. The financial returns from the  
7 harvesting. Is that what you --

8 Q. Yes.

9 A. Yes. Yes, it's very difficult for  
10 forest renewal to -- since it is a long-term  
11 investment, to stand up in the -- against some of the  
12 year-to-year pressures of education and social services  
13 and other demands like that.

14 Q. Now, we have looked at a number of  
15 case studies that the Ministry has produced for us and  
16 we've looked at the costing of artificial regeneration  
17 techniques, and I would suggest to you that given the  
18 uncertainty of funding, that reliance on these very  
19 expensive, artificial, regeneration techniques is very  
20 problematic for the future, security of the wood  
21 supply, and that would it not be more prudent for the  
22 Industry to be attempting to develop cheaper methods of  
23 regeneration relying more on artificial - excuse me -  
24 on natural means of regeneration or the enhancement of  
25 natural regeneration?

1 MS. CRONK: I don't object to the  
2 question, Madam Chair, but I object to the suggestion  
3 these witnesses indicated those treatments were very  
4 expensive. The evidence was it was a comparative  
5 relative thing. But apart from that, I don't object to  
6 the question.

7 MS. SWENARCHUK: There were questions and  
8 responses which indicated the opinions of the witnesses  
9 on some of the treatments were, in fact, that they were  
10 expensive.

11 MS. CRONK: I agree with that. I don't  
12 agree with your characterization of the evidence. I  
13 don't object to the question. It's the precludes that  
14 give me a problem.

15 MR. WADDELL: I'm sorry? I think you  
16 will to have re-ask the question.

17 ---Discussion off the record

18 MS. SWENARCHUK: Q. Before we come to  
19 the cost question there is one other issue I did want  
20 to put to you, Mr. Waddell, and that is the position  
21 expressed in the witness statement that a new timber  
22 production policy is necessary.

23 First of all, you indicated that the  
24 forest production policy, as it was when called, of  
25 1972, is no longer adequate to -- it's on page 134.

1 The 1972 policy is no longer an adequate base upon  
2 which to make long-term wood supply demand in the area  
3 of the undertaking.

4 First of all, why is it no longer  
5 adequate?

6 MR. WADDELL: A. We feel that it was  
7 formulated in 1972. This is 1990. 18 years have  
8 elapsed. A lot of changes have occurred out there.  
9 Purely from a time period alone it needs to be analyzed  
10 to see if it is relevant.

11 Secondly, I suppose personally, I have  
12 some reservations about how it was put together in  
13 the -- 1972. If it involved Industry at all, it was  
14 minimal involvement and we have repeatedly emphasized  
15 through this Panel that we would like to be involved,  
16 in fact, we feel it's imperative that we be involved in  
17 the next production of a timber policy, and in the view  
18 of the FMA task force and in the view of Professor --  
19 or Dr. Baskerville, in his report, they both came to  
20 the same conclusion that the policy needed to be  
21 revised, that it wasn't particularly relevant in this  
22 day and age.

23 Q. Now, you've emphasized the importance  
24 of Industry participation in that process in developing  
25 a new production policy. Would you not agree that

1 other forest users should be entitled to participate in  
2 that process as well?

3 A. Yes, we would agree, and I believe  
4 that - I believe that our proposed terms and conditions  
5 in the - will speak to this. If the planning, the  
6 timber management planning process that our association  
7 is proposing will provide for that kind of input, it's  
8 my understanding.

9 Q. But talking now about the production  
10 policy, development of the production policy?

11 A. Yes.

12 Q. You would agree there as well that  
13 the public should be involved in this?

14 A. Yes, we would.

15 Q. Now, let's come back to the money  
16 question. From the case studies presented and from the  
17 evidence overall, it appears that on the FMAs from  
18 which we've heard, 60 to 70 percent of the regeneration  
19 efforts being undertaken are artificial regeneration,  
20 and I'll characterize that as intensive management, and  
21 we've looked at some of the costs of those.

22 You will agree with me, will you not,  
23 Mr. Waddell, that in most cases artificial regeneration  
24 techniques are more expensive than natural regeneration  
25 techniques?

1                   A. Well, if I could go back to your  
2 first percentage before I answer the question. I'm not  
3 sure I understood you because I think you said that 60  
4 to 70 per cent is being done intensively, but I'm not  
5 sure if you were talking about our five case studies or  
6 FMAs in general.

7                   Q. I was talking about my questions to  
8 each of you about your FMA areas this morning?

9                   A. These particular FMAs around the  
10 table?

11                  Q. Yes.

12                  A. I think I heard from Mr. Squires that  
13 his percentage of artificial regeneration was close  
14 to -- pardon me, his percentage of natural regeneration  
15 was close to that percentage of 60/70 rather than the  
16 way you are describing it.

17                  Q. Is that correct?

18                  MR. SQUIRES: A. That is correct, Ms.  
19 Swenarchuk.

20                  MR. WADDELL: A. I believe for the other  
21 people on the table that 60 to 70 per cent was a fair  
22 statement for the per cent that we are regenerating  
23 intensively, if you wish to use that word.

24                  Is that correct, Mr. Ferguson,  
25 Mr. Gemmell?



1 MR. GEMMELL: A. That's correct.

2 MR. FERGUSON: A. That's correct.

3 I might add to that, if I may, that  
4 intensively is not a term which I would concur with in  
5 that approximately 50 per cent of regeneration,  
6 although it is artificial regeneration on forest which  
7 I'm talking about, the English River forest was in fact  
8 seeding, which I do not consider to be a particularly  
9 intensive form of forest management.

10 MR. WADDELL: Thank you.

11 A. We are in the same situation and we  
12 would prefer to call it artificial regeneration rather  
13 than intensive. Intensive has a different connotation.

14 MR. SQUIRES: A. I would like to add  
15 that the figures I gave on the work that we are  
16 performing this summer, approximately 40 per cent of it  
17 is seeded to regeneration level.

18 MR. GEMMELL: A. I guess I better add  
19 also 25 per cent of our artificial regeneration is  
20 seeding areas.

21 Q. Is seeding a less expensive technique  
22 than planting usually?

23 MR. WADDELL: A. Usually.

24 Q. And is site preparation for natural  
25 regeneration less expensive usually than seeding or

1 seeding with site preparation?

2 A. Well, normally your seeding requires  
3 site preparation in advance.

4 Q. So as a general proposition, is not  
5 the enhancement of natural regeneration techniques less  
6 expensive than the use of artificial regeneration  
7 techniques?

8 A. As a general proposition, natural  
9 regeneration is cheaper than artificial, but as our  
10 Panel has repeatedly tried to convey in the past  
11 several days, natural is only effective under certain  
12 range of conditions, sites, species, and so forth, and  
13 the forest manager uses his best judgment to determine  
14 where natural regeneration will be effective and will  
15 give the required degree of stocking and cost is --  
16 while the -- I mean, in a perfect world if we could use  
17 natural regeneration everywhere it certainly would be  
18 the cheapest way to go, but there are many, many sites  
19 that we cannot get the regeneration to the species we  
20 want by using natural regeneration.

21 Q. Now, the Board has heard evidence  
22 that about 89 per cent of the harvesting done is  
23 clearcutting, and I think you agreed with me, Mr.  
24 Waddell, that the harvesting referred to, generally  
25 speaking in this witness statement, is conventional

1 clearcutting; is that not correct?

2 A. Certainly in the Boreal forest it is.  
3 It's not in the St. Lawrence....

4 Q. Right.

5 A. What's the name of that forest,  
6 St. Lawrence....

7 MR. MURRAY: A. Great Lakes/St.  
8 Lawrence.

9 MR. WADDELL: A. Great Lakes/St.  
10 Lawrence.

11 Q. So did I take it then that when you  
12 say that natural regeneration will not provide you with  
13 the species you want, you are saying that in the  
14 context of natural regeneration, following the type of  
15 harvest practices that are now prevalent; is that  
16 correct?

17 A. No. I'm saying it in the context  
18 of obtaining regeneration following any type of  
19 harvesting.

20 Mr. Gemmell has given evidence, for  
21 example, that on certain of his spruce sites, his  
22 uplands spruce sites, that natural regeneration very  
23 likely would not be possible on his rich uplands --  
24 regeneration to black spruce would not be possible on  
25 his uplands productive sites because of the competition

1 problem.

2 By the time the seed germinated and got  
3 any growth the competition would have choked it out, so  
4 that I'm not putting that statement I made in any -- in  
5 the context of any type of cutting, it's just reality.

6 Q. Would you turn to page 13 of the task  
7 force report, please? It's Exhibit 940.

8 A. I have it.

9 Q. And I'm looking at the last paragraph  
10 of the page.

11 "It is difficult to determine the  
12 correct level of silvicultural activity  
13 within an FMA. The FMAs are premised  
14 upon the requirement that productivity of  
15 the forest be maintained if not enhanced.  
16 It is becoming evident that funding may  
17 not be available to accomplish this  
18 unless extensive use is made of natural  
19 regeneration, that it is not possible to  
20 practice intensive management upon every  
21 area harvested and that, indeed, the  
22 best course of action, in some cases, is  
23 to harvest the site and walk away from  
24 it.

25 "In the interest of maintaining a

1 future wood supply, a more formal  
2 approach must be taken which somehow  
3 bridges the gap between attempting to  
4 achieve the ultimate and failing to do so  
5 and relying on extensive natural  
6 regeneration."

7 Now, do you agree with that paragraph,  
8 Mr. Waddell?

9 A. Just give me a moment, please.

10 Yes, I agree with it.

11 Q. Now, would you agree that given the  
12 on-going funding uncertainties, that an attempt to  
13 develop cheaper methods of regeneration would be a  
14 prudent course for the Industry?

15 A. Provided they are successful methods.  
16 As I have tried to say before, cheapness is not -- your  
17 cost is not the only component that we must look at on  
18 a site when we are prescribing the silvicultural  
19 treatment, and just because a form of natural  
20 regeneration is the cheapest, if there is not  
21 reasonable expectation of our being able to get a  
22 forest back on there that will fulfill the productivity  
23 of the site, then it's probably not a good investment.

24 Q. Agreed, Mr. Waddell. But, again,  
25 given the continuing unsatisfactory state of the



1 funding and the degree of reliance on artificial  
2 regeneration at this time, I take it you would agree  
3 that if cheaper methods can be found or can be  
4 utilized, they should be?

5 A. Again, providing that those cheaper  
6 methods will give us a successful regeneration of those  
7 lands and to a level that is acceptable.

8 I would like to add a further point there  
9 and, again, say that on our own particular FMAs which  
10 is -- where jack pine is the predominant working group,  
11 at the present time there is no method that we are  
12 aware of in natural regeneration that will give us  
13 successful renewal and we must rely on artificial,  
14 either be it planting or be it seeding, and the same  
15 situation exists on other FMAs, two different species,  
16 such as Mr. Gemmell has indicated in the uplands  
17 spruce.

18 Q. On page 155 of the witness statement,  
19 Mr. Waddell, you have indicated a number of research  
20 and development trials being carried out by the  
21 Industry. I don't see any trials there that are  
22 specifically directed to natural regeneration  
23 improvements.

24 A. I will ask Mr. Nicks, if you will, to  
25 comment on this as this was the area that he

1 investigated for the Industry.

2 MR. NICKS: A. The list of trials does  
3 not include, to my quick review - or after a quick  
4 review - any natural regeneration trials, but as I  
5 indicated in the witness statement, this is by no means  
6 an exhaustive list.

7 There were only six companies surveyed.  
8 I believe they were the first six FMA holders. We were  
9 merely trying to get a glimpse of what might be going  
10 on out there.

11 I would point out there are 11 trials in  
12 direct seeding, which is certainly a low-cost  
13 technique, many of which are directed at simultaneous  
14 site preparation and seeding. In fact, we have a  
15 couple in that area.

16 Aerial seeding trials at various rates,  
17 modifications of Bracke scarifiers, development and  
18 testing of black spruce seeding devices, development of  
19 spot seeders for feller-buncher heads so that seeding  
20 can be done during harvesting.

21 So although there are no natural trials  
22 per se in this, as I say, this glimpse of what is going  
23 out there, there are certainly a number of trials  
24 directed today low-cost regen.

25 MR. GEMMELL: A. May I just add,

1 Ms. Swenarchuk, I already talked about the trials that  
2 we have had in natural regeneration on our -- on the  
3 Iroquois Falls Forest and it goes back many, many  
4 years. It's not listed there, I suppose, because we've  
5 always been doing it. It's not a special trial that  
6 has come up in the last number of years. It's been  
7 on-going and I did indicate that we have been doing  
8 that for a long time.

9 Q. And your case study indicated that  
10 there was a move away from techniques that were used on  
11 blocks C and D.

12 A. The technique was away from alternate  
13 strip in Group C, but not away from a natural  
14 technique. Again, I'll emphasize that, and that is the  
15 advanced growth method and the development of our  
16 harvesting equipment is geared to that type of harvest  
17 on those low sites. And that is on-going. We change  
18 every year with that equipment.

19 Q. That is one example.

20 MS. SWENARCHUK: Well, subject to my  
21 review of Mr. Nicks' report, Madam Chair, those are my  
22 questions.

23 MADAM CHAIR: Thank you,  
24 Ms. Swenarchuk.

25 MS. CRONK: Madam Chair, could I just get

1 an estimate of the time, if possible, from the Ministry  
2 of the Environment and the Ministry of Natural  
3 Resources, assuming that the Anglers & Hunters are half  
4 a day tomorrow? I'm interested to know whether it's  
5 likely these witness are going to be required to come  
6 back on Monday.

7 MADAM CHAIR: All right.

8 Mr. Freidin?

9 MR. FREIDIN: I think I better go back to  
10 my original three to four hours.

11 MS. CRONK: Three to four hours.

12 MR. FREIDIN: Three hours.

13 MS. CRONK: If I said it again, can I get  
14 you to two?

15 MS. SEABORN: I think my original  
16 estimate was two to three hours and I'll stick with  
17 that estimate.

18 MADAM CHAIR: We won't be finished  
19 tomorrow.

20 Thank you very much.

21 MR. FREIDIN: Madam Chair, perhaps just  
22 for the record, I can't be sure of all of the exhibits  
23 that I might use, but I can advise that I will use  
24 probably Exhibit 513, the slides for the case studies  
25 in Panel 4, some of the exhibits -- I would ask that

1 everybody bring their exhibits which were filed in this  
2 Panel, Exhibit 7 --

3 MS. CRONK: Sorry?

4 MR. FREIDIN: Exhibit 7, which is the  
5 Timber Management Planning Manual; Exhibit 700, which  
6 are the Ministry terms and conditions; exhibit 4 which  
7 is the Environment Assessment document; and the Panel 4  
8 case studies.

9 MADAM CHAIR: All right. The slides,  
10 were you talking about the slides in Case Study D of  
11 Exhibit 1100?

12 MR. FREIDIN: 1101, is it?

13 MADAM CHAIR: Exhibit 1101.

14 MR. FREIDIN: Actually, just bring slide  
15 9.4 of Case Study 4D and I think that will do the  
16 trick. Slide 9.4 for Case Study 4D. I think that is  
17 Mr. Gemmell.

18 MS. CRONK: Madam Chair, there is one  
19 other matter that I would like to raise just before we  
20 leave.

21 First of all, the Panel gave an  
22 undertaking, specifically Mr. Nicks and Mr. Waddell, as  
23 I recall from Ms. Swenarchuk, to obtain the details of  
24 the natural regeneration component shown in the first  
25 five-year review specific to E.B. Eddy, Exhibit 68.



1                   Two matters with respect to that. I drew  
2                   to Ms. Swenarchuk's attention at the break that part of  
3                   the information that she required and which was subject  
4                   to the undertaking is, in fact, contained in the report  
5                   two pages at page 72.

6                   With that in mind, I point that out to  
7                   the Board so that the Panel may be clear as to what it  
8                   is they have to get tonight.

9                   And there was a second part to the  
10                  undertaking. It had to be with an explanation of how  
11                  two of the 207 hectares shown as having been treated by  
12                  the Industry, naturally, what form of natural treatment  
13                  was involved.

14                  So I'm asking for Ms. Swenarchuk's  
15                  assistance as to whether, now that I've pointed out  
16                  Table 6 to her at page 72, the undertaking relates only  
17                  to the second part or is there something else that she  
18                  requires of the Panel in regard this evening.

19                  MS. SWENARCHUK: That's sufficient.

20                  MS. CRONK: That's fine. Thank you.

21                  Secondly, there was an undertaking with  
22                  respect to Table 3 that Mr. Nicks gave concerning a  
23                  breakdown again with respect to the natural  
24                  regeneration entries, and I would ask the permission of  
25                  the Board, as has been given in the past, that the

1 support people here for the Panel be able to deal with  
2 the witness for the purposes of getting photocopying  
3 done and getting the information provided in the way we  
4 are to produce tomorrow morning. That is not counsel.

5 MADAM CHAIR: Any objections from the  
6 parties?

7 MS. SWENARCHUK: No objection.

8 MADAM CHAIR: Thank you, and thank you  
9 witnesses and Ms. Swenarchuk and Ms. Cronk for today.  
10 It's sort of difficult circumstances and lots of  
11 interruptions. It will be better tomorrow.

12 ---Whereupon the hearing was concluded at 4:55 p.m.  
13 to be reconvened on Thursday, May 10th, 1990 at  
14 8:30 a.m.

15  
16  
17 This is to certify that the  
18 foregoing is a true and accurate  
19 computerized transcription of  
20 the proceedings to the best of  
21 my ability and skill.

22  
23  
24  
25  
-----  
SANDRA M. NAZAREC, C.S.R.

[c. copyright 1985]











